



Vol. 8

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No. 4

The Florida State Horticultural Society

By L. B. Skinner, President

For forty years the Horticulturists of the State have met once each year to greet each other—get acquainted—relate their experiences during the past year—and listen to the experiences and observations of their fellow growers. They have placed their problems before the meeting and have discussed them and endeavored to reach conclusions.

Since the organization and establishment of the State Experiment Station at Gainesville we have had the very great advantage of meeting with the men of that Experiment Station who are making it their special work, to investigate, experiment with and solve our problems for us. This has been most valuable to every fruit and vegetable grower in the State. One is tempted to say especially valuable to the new growers just starting. That is true, but every old timer realizes how very great an advantage is the specialized work of these trained men of the Department of Agriculture.

Every old time grower knows the difficulties, the problems and at once recognizes the valuable assistance of these experts and their most efficient work.

It is wonderful to note the eagerness with which WE growers seek these meetings when they have major problems to be brought before this Society to be solved. This was notably true of the recent visit of the Aphid, and the Canker times.

The Florida State Horticultural



L. B. SKINNER
President Florida State Horticultural Society

Society should be sustained if for no other purpose than to be ready for any emergency that may arise, and it will be—it has always been ready and its very life has been devoted to the welfare of the industry and the beautifying of the State.

Many things will be brought before the coming meeting at Bradenton, but perhaps no more important matter than a discussion of the meth-

od of propagating our varieties—on lemon root and then interposing another tree between the root and the bearing tree.

This subject has never received the attention it deserves. If you have any observations or experiences covering this particular problem, you will be doing others a great service if you will come to the meeting and give us the benefit of your conclusions.

There is here a big chance to improve the quality of our fruit and a world of knowledge to be gained by experiment—come and tell us about it.

This method will be brought up for discussion at the coming meeting and some very interesting information will be coming. Every grower who desires fine fruit should investigate this method. Another feature of this method is that it makes the tree a heavy bearer and this method has been practiced by the Japanese for many years.

The greatest question before Floridians today is how to get back the flow of tourists and how to turn the tide of the flow of capital Florida way again. One of the ways in which this can be done is to make the State beautiful to look upon. We have our good roads, we have our orange groves. We need to specialize in beautifying the State, our highways and our homes.

This annual meeting of the Society
Continued on page 32

Horticultural Meeting At Bradenton

By Bayard F. Floyd, Secretary

The Fortieth Annual Meeting of the Florida State Horticultural Society opens at 8:30 P.M. on Tuesday April 12th and continues until Friday April 15th. Provisions are being made by the citizens of Bradenton to take care of a large attendance. An excellent program of timely interest has been prepared that will be of particular interest to the fruit growers of Florida.

At the close of the Wednesday afternoon program the membership will be guests of the Bradenton Chamber of Commerce on a motorcade to points of interest around famous Royal Palm Nurseries at One-co and the Atwood Grapefruit Groves at Palmetto.

For those who wish to take a little time off either during or after the meeting, there are several golf courses available, surf bathing at the Beach, visits to the extensive tomato and celery fields around Bradenton and Palmetto, and trips to the Whitfield Estates, to the Ringling Developments at Sarasota and to Venice the location of the big developments of the Brotherhood of Locomotive Engineers.

Headquarters

The headquarters for the Society are to be at the Dixie Grande Hotel in Bradenton. There are a number of other hotels at which excellent accommodations can be obtained. These include the Manatee River Hotel and the Hotel Manavista.

Meeting Place

The meetings of the Society will be held in the Women's Club, which is about three blocks away from the Headquarters.

Rose Show

The Second Annual Rose Show will be also held in the Women's Club. This opens on Wednesday morning, April 13th. Members who have roses which are doing well now are urged to bring a dozen or more blooms to enter in the Show. Mr. Leo H. Wilson is the Director of the Show and will receive and enter all flowers brought to him at the Women's Club.

Florida Rose Society

The Florida Rose Society will hold its second annual session in the private dining room of the Dixie Grande Hotel. The meeting opens at 10:00 A.M. on Thursday, April 14th.

Annual Dues

Those who do not have opportunity to attend the meeting at Bradenton should send their 1927 membership dues of \$2.00 to W. W. Yothers, Assistant Secretary, at Box 719, Orlando, Florida.

Those who wish membership in the Florida Rose Society will send Mr. Yothers \$5.00. This will include membership in the Florida State Horticultural Society, the American Rose Society and the Florida Rose Society. The members of the Florida Rose Society receive free of further cost the American Rose Annual for 1927, which is a book of more than 200 pages that discusses all phases of rose culture in America.

Tuesday, April 12, 8:30 P.M.

Call to Order, Pres. L. B. Skinner.
Invocation, Rev. E. H. Jennings, Bradenton.

Music, Bradenton Choral Society.
Address of Welcome, W. A. Manning, Bradenton.

Response to Address of Welcome, Karl Lehmann, Orlando.

Music, Bradenton Choral Society.
President's Annual Address,
Opening Address, Prof. Walter Matherly, Gainesville.

Social Hour.

Wednesday, April 13, 9:30 A.M.

Report, Committee on Citrus Soils and Cover Crops,

E. L. Lord, Gainesville
K. E. Bragdon, Winter Haven
J. R. Gunn, Kissimmee
Address, "Citrus Fertilizers" Dr. R. W. Ruprecht, Gainesville

Address, "Citrus Trees—Cold Effects and Cold Protection" Dr. A. F. Camp, Gainesville

Wednesday, April 13, 2:00 P.M.

Address, "Citrus By-Product Situation in California", C. G. Church, Los Angeles, Cal.

Address, "Citrus Fruit Utilization" Isabelle Thursby, Tallahassee

Address, "Iceicles and Sun Spots", Prof. M. R. Ensign, Gainesville

Wednesday, April 14, 8:00 P.M.

Address, "What are Plant Diseases", Dr. O. F. Burger, Gainesville
Address, "Some Recent Observations in California", T. Ralph Robinson, Washington

Address, "The Biological Factors of Insect Control", Dr. E. D. Ball, Sanford, Fla.

Address, "Florida Celery Diseases and Their Economic Control", A. C.

Foster, Sanford, Fla.

Thursday, April 14, 9:30 A.M.

Report, Committee on Citrus Spraying and Dusting,

R. L. Westmoreland, Lake Wales,
Max Waldron, Babson Park

Address, "Plant Quarantine Legislation", Wilmon Newell, Gainesville
Address, "Melanose of Citrus Trees", Dr. F. A. Wolfe, Orlando

Address, "What We have Learned from Aphid Control during 1926", Prof. J. R. Watson, Gainesville

Thursday, April 14, 2:00 P.M.

Report, Committee on Early Citrus Maturity,

Robert Prine, Palmetto,
E. F. DeBusk, Gainesville

Address, Victor Newton, Orlando
Address, C. C. Commander, Tampa

Thursday, April 14, 8:00 P.M.

Address, "Fruit Frost Service", J. B. Kincer, U.S.D.A., Washington

Address, "Observations Made in the West", L. M. Rhodes, Jacksonville.

Address, "Supply and Demand in Citrus Marketing", Frank Kay Anderson, Altamonte Springs

Address, "Fruit Grades and Fruit Growing", J. C. Merrill, Leesburg

Friday, April 15, 9:30 A.M.

Address, "Pecan Growing in Florida", G. H. Blackmon, Gainesville

Address, "Preparation for Horticultural and Agricultural Service", Ralph Stoutamire, Gainesville

Address, "An Economical Method of Loading Cars", H. B. Stevens, Deland

Business Session.

PORTO RICO'S CANNED

GRAPEFRUIT TRADE

The following table of exports of canned grapefruit from Porto Rico was appended to a trade letter from San Juan Office of the Bureau of Foreign and Domestic Commerce, dated February 25, 1927.

To the United States

	Pounds	Dollars
1923-24	3,861,555	306,429
1924-25	3,840,819	370,384
1925-26	6,348,020	605,666

To Foreign Countries

1923-24	52,951	6,301
1924-25		3,282
1925-26	57,542	7,585

California's Solution Is Not Florida's

The following talk was broadcast from Station WDBO and WOCB at 8:55 PM, from Orlando, Fla., Tuesday, March 22, 1926, by A.M. Pratt, Sales Manager, Chase & Co., Orlando, Fla.

The marketing problem of Citrus fruits is receiving considerable thought and rightly. The orange season is nearly over and everything is fresh in our minds, including our disappointments that the season did not turn out better.

There seems to be fairly general convictions that ways must be found for more practically co-operating. California's example has been cited frequently, but there are many reasons which make our problem vastly different than California's. In the first place, Nature forced the co-operative habit of mind on California orange growers. Without irrigation water orange growing was impossible. Growers therefore, at the very start of things, found they had to get together, geographically and mentally. Plans for developing water, for getting it to their land, and for prorating its use were entered into because it was imperative. The fact that orange growers in California are adjoining because of water compelling this, also made for neighborliness and a community spirit.

In Florida there is no compelling force of Nature along similar lines. Our groves are anywhere and everywhere, and frequently one man's holdings are miles away from another's. Florida growers haven't the incentive at the start off toward a community spirit.

The distance from the market in California is another compelling motive. California oranges take on an average over twice as long, ten or twelve days, to reach destination, as compared with Florida's four or five days. Growers in California had to work out elaborate sales machinery to meet their problem. Florida growers for many years had a big proportion of buyers in the State, ready to dicker for the crop, with the individual growers. Eastern buyers could not afford to buy California's this way, not only because of the additional time and expense of the journey, but the additional time the fruit was in transit where the hazard of buying was doubled or tripled, account of the extra time enroute, due to market fluctuations, as well as risk of decay or freezing.

Again assuming that our present needs might be more keenly felt,

we run into a vicious circle of two limitations—the nearness to market, and the resulting short time we have to work on cars, after receiving the sizes, and our freight rate structure, which penalizes every move we make. The larger the volume handled the more complicated the task of selling before shipping, or before it reaches destination.

In California 85% of the sales, outside of Auction, are made on arrival. Mass productions and sales through one head forces this price arrival policy. The arrival sales policy in Florida is avoided, so far as possible, because every car-lot customer knows that a diversion will cost an additional dime or quarter to move the car, if the seller does not get together with the buyer on arrival. In California it costs no more in freight to sell the car in Omaha, Minneapolis, Chicago, Detroit, Buffalo, Syracuse or Boston, than in Kansas City, or any more western point, as far back as Denver. California has its flat postage stamp flexible freight rate, which makes available, as price arrival markets, hundreds of cities without any additional expense for freight to any of them. Its freight structure is such that its proportion of pocket-markets, where one cannot get out of, for self-protection is almost nil compared with our many pocket-markets, and the rigid inflexible restrictions we have in our diverting, even at the advanced rate.

Therefore our nearness to the big consuming centers, and the short time allowed to work on cars, together with our complicated freight structure and the wrong psychological effect on the minds of the buying trade, place us in a position where big volume of rolling cars in the hands of a single man or organization present limitations that are stupendous.

The marketing game in Florida is therefore much faster and more complicated. It being undesirable to sell on arrival, it forces the necessity of more executives handling the problem—more operators. The division of labor and standardized processes of handling in California, where one organization can successfully sell and distribute fifty thousand cars a year, cannot be applied to our task, which

is too tremendous for a few brains in one organization to cope with, in the short time enroute and under our penalizing freight rates.

It is therefore logical that many operation, each with their personal incentive, should tackle the problem and work with their special customers and agents and direct their respective business. Not only the points mentioned make the task incomparably greater for one organization to direct its sales, but the season in Florida is only six or seven months long, compared with California's twelve months. It is so tremendous that if it devolved upon one organization it would force more cars to auction, where the auction bidders determine the price, and force more cars being turned over to jobbers on consignment, where the prospective buyer determines the price.

All these things seem to lead to only one form of practical co-operation in Florida, namely co-operation in a broader sense than California has applied, by finding common ground for independent organizations, representing the growers, to operate, without any of them losing their incentive, initiative or responsibility. In the same way that Nature and Necessity forced California growers to apply successfully the co-operative idea, Nature and Necessity here will force shippers to get together for the common good of the industry and themselves. The volume has reached a point in both States where the speculating element is rapidly declining, as speculators are too consistently losing. Merchandizing must take the place of speculation and the service organizations of Florida must face their problem together and prepare to undertake together their increasing responsibilities which the very nature of things seems to be thrusting upon them.

With the development of the poultry industry in the state, Florida should become famous for fried chickens.

Is there a surplus of milk produced in Florida? One good way to help increase consumption is to produce milk cheaper and sell it at a lower price than it is now being sold at.

Mayo Makes Important Recommendations

Important recommendations were made by Commissioner of Agriculture Mayo at a meeting of the Fruitmen's Club in Orlando on the night of March 29. The meeting was held at Angebilt Hotel and in the absence of President Victor B. Newton, the meeting was presided over by F. L. Skelly of the American Fruit Growers Inc.

Commissioner of Agriculture Mayo had just returned from California, where in company with Commissioner of Markets L. M. Rhodes, he had made a study of agricultural and horticultural subjects in the western state.

Mr. Mayo made three important recommendations, as follows:

(1) A state law for standardization of grades.

(2) A state law to restrict shipping of dry or frosted fruit.

(3) Changes which would strengthen the "Green Fruit Law."

All of these proposals were agreed to in principle by the gathering and were referred to committees of the Fruitmen's Club to work out details and return to the organization for approval.

E. C. McClain of the Manatee Growers League presented to the club a change proposed in the green fruit law to make it more workable. This also was referred to the committee in charge of such legislation.

Ober Strauss, federal inspector, discussed with the gathering the work of his department and outlined what might be expected from a standardization law.

Dr. Wilmon Newell, Dean of the State College of Agriculture, made an interesting talk on the work of the State Plant Board and the State Experiment Station.

John S. Taylor, a member of the Club and president of the Senate, told the members he would again be at the service of citrus growers of the state insofar as he was able on any legislative projects which might be present for consideration.

In presenting his report of his recent visit to California, Commissioner of Agriculture Mayo said in part:

Citrus Fruits

"We found that 90 to 92 per cent of the lemons and 73 to 75 per cent of the oranges are packed and sold by The California Fruit Growers Exchange, and other cooperatives handle approximately 10 per cent. There

are only twelve or fifteen independent marketing agencies of any importance, and they market only 8 per cent of the lemons and 15 to 18 per cent of the oranges. Practically everyone claims that California has an over-production of every thing. This season's orange crop ending October 1927 is estimated at: Navel oranges 13,181,000 boxes, Valencia oranges 12,644, 000 boxes, or a total of 25,825,000 boxes of oranges and 5,939,000 boxes of lemons. Shipments of oranges run through the entire year ranging from 400 to 1200 carloads a week, Navels from December to May, Valencias from May to December.

"The average price for 75 pound boxes f.o.b. this season, so far has been: Navels \$3.15, Valencias \$3.72, Lemons \$3.78. It costs an average of \$1.00 to pick, pack, load and sell, and \$1.50 to produce or a total cost of \$2.50: net average \$1.05 per box. Their boxes are smaller than Florida boxes, therefore, they ship 462 boxes of oranges and grapefruit to the car.

"The California Citrus Growers Exchange, handling around 75 per cent of the oranges, control shipments and enforce grades, spend more than a million dollars advertising their products, and thereby save the industry. All fruit that is in grade, goes into the boxes for shipment. The next best is sold to peddlers for the trade in Los Angeles, a city of 1,250,000 people and San Francisco, a city with its suburbs of 1,000,000 population, and other smaller cities. California having over 4,000,000 people consumes a lot of fruit locally. After these peddlers cull through the fruit at packing houses, the culls they leave or rough culls, goes through the By-Product Plant. The Sunkist brand only allows five per cent tolerance on frost damage and ten per cent tolerance on appearance. The Exchange does not sell for higher prices than the independents. In fact, it is admitted by all that they hold the umbrella for the independents sometimes, but it is universally admitted that they save the industry by maintaining excellence in grade and quality and in regulating shipments to market. The Exchange also markets 15,000 carloads of deciduous fruits during their dullest season, thereby materially reducing operating expenses.

Lemons

"They claim they are growing twice as many lemons as the United States and Canada will consume. They are producing 21,000 carloads of lemons, shipping 13,000 carloads of their very best and the other 8,000 carloads go into by-products and to waste.

"We were told by one very prominent and wide-awake independent market man and lemon grower that the by-products brought the lemon growers nothing and he said that he sold 65,000 boxes of very high grade lemons for \$27,000 gross, less than 40c per box. They cost him 90c. He states that many lemon groves were not worth, as a productive proposition, more than \$600 per acre, while the raw land cost \$1,000.00. When we inquired why, he quickly and emphatically said "Over-production". He said that although the California Citrus Growers Exchange is an efficient organization and controls 92 per cent of the lemons, it is impossible for any agency on earth to sell a surplus at a profit and he added with great earnestness, "If California, Florida, Arizona, and Texas continue to put out citrus groves, millions of boxes would rot in the fields, and thousands of growers would go broke."

Citrus By-Products

"We found that the California Citrus Growers Exchange owns two large by-product plants, one for oranges and one for lemons. They have \$750,000 invested in these plants and have been in the business eleven years. They have experts employed to look after the three phases of manufacturing by-products: Bacterial, Chemical and Mechanical. The by-products are orange oil, orange juice, raw juice, concentrated juice and cowfeed or pulp. Their greatest difficulty is with the juice they have found no way to keep fresh, although they have spent \$15,000 trying to do so, and if they could, every glass of fresh juice would compete with oranges in the market. The greater difficulties lie in selling these by-products, not in manufacturing them. The cull fruit put into by-products returns the grower \$3.00 to \$11.00 per ton or 40c to 50c per box net.

"They tried the manufacture of marmalades and lost \$450,000 before
Continued on page 28.

Citrus Fruits, Exhibits

Florida's Exposition On Wheels

By J. C. Sellers, Jacksonville, in *Manufacturers Record*

Why, it may be asked, is Florida sending out three special railroad trains, the cars of which are filled with Florida products and information with reference to the State's resources and attractions? The answer is easy: To acquaint millions of people outside of Florida with what this State really is and what it has to invite the interest of those people who are not yet familiar with this "land of sunshine and of flowers," of natural resources innumerable, vastly varied and enormously valuable.

That is why, today, three trains of specially decorated cars, each filled with fruits (particularly citrus) and flowers and vegetables and manufactured products, with photographs and with reading matter, all of which constitutes a mass of reliable information concerning Florida—information such as millions of people in the States to be visited will be pleased to see and hear and absorb, realizing that that which they see is real and what they hear and read is authentic.

Months ago certain Florida people, realizing that of the 120,000,000 people in the United States there are millions who do not know Florida, who do not realize that this State is vast in extent, that it has more valuable resources and many superior attractions, and that it is both a playground and a work-shop, bethought themselves: "Why not carry Florida to these millions of people, or, at least, carry as much of the State as can be displayed advantageously within the limited space afforded by railroad cars?" Out of that thought developed the three trains that left the state on March 15, carrying Florida's message, in visible form, to as many people as it is possible to reach in a railroad journey of thousands of miles, in States east of the Mississippi River mainly.

Of the three trains that left here, one proceeded to New York and New England, another toward the Great Lakes and the third into the great West, the latter scheduled to go as far as St. Louis and Kansas City. Stops will be made in a number of cities, in many of which official welcomes will be extended, and in all of which the exposition cars will be open to the public, which will be cordially invited to visit the trains and inspect the exhibits in the various cars. Mo-

tion pictures will be presented in the theater car. Everything will be free; nothing will be for sale. Qualified representatives will give information concerning the exhibits and with reference to Florida in general.

For the financing of these Florida exposition trains, public-spirited Florida citizens, business firms, chambers of commerce and the railroads co-operated, financing the enterprise and seeing to it that only worthwhile exhibits were carried, exhibits that would tell the story of the real Florida as comprehensively and as extensively as it may be told in an exposition of this character.

To attempt to tell all of what the exposition cars contain would be impracticable, even were space available in these pages for the telling. Suffice it to say that from southernmost points in Florida to those in the northern portion of the State have been gathered thousands of exhibits that cannot help but to attract the interested attention of those who view them, and that also will carry convincing evidence of Florida productiveness and of Florida charm and substantiality.

Even many Florida people who visited these exposition cars in Jacksonville were convinced by what they saw there on exhibition that they themselves do not know their own State as perfectly and as comprehensively as they thought they did. If, then it is argued, there are so many worthwhile things on exhibit in this display that even Florida people do not know about, but concerning which they are mightily interested, how much more delighted and benefited should be the millions of visitors who will see in these cars so much of the real Florida as to convince them there is very much more to be seen and appreciated in this State? They will visualize a State of wonderful natural beauty and of natural resources, as well as of manufacturing, of great cities with modern public utilities, and of educational and cultural development and growth, all indicated by what is to be seen aboard these trains as they stop in scores of towns and cities.

Florida, being largely agricultural, presents a graphic picture in the Penney Farms Exhibit, telling somewhat of the agricultural activities on a 120,000-acre tract that is being put

under intensive and practical agricultural cultivation, with its Penney-Gwinn Institute of Applied Agriculture providing instruction to young men and young women gathered from nearly every State in the Union—prospective farmers and farm home makers. In this exhibit is a representation of a typical farm community center in the 187 square miles of agricultural land comprising the Penney Farms. Also there is a reproduction of the world-famous Quissana spring, located at Green Cove Springs, near the Penney Farms development, this spring having a flow of 3000 gallons of water per minute. Agricultural products are included in this exhibit.

Dade county, of which Miami is the "Magic City," has a wonderful display of citrus and tropical fruits and vegetables and of woods and manufactured products, into the making of which enter various Florida raw materials, as of wood, clay, etc. Progress in the tile industry in the Miami region is demonstrated by many photographs, as well as by various types of the clay products. Hand-carved woodwork forms another display. These pieces, all of solid wood of high quality, have been done by experts brought to this country by a Coral Gables firm. The University of Miami, in Coral Gables, is represented by a plaster model of the institution and the campus.

These exhibits are typical of many others that are in the cars forming the Florida exposition trains. Every thing is intended to be first educational and then pleasurable. Florida is sending out in these trains a volume of reliable information concerning the State such as rarely, if ever, has been attempted by any other State in the Union. It is information that will carry enlightenment with reference to Florida wherever it is received and at the same time will do much to disabuse the minds of those who have listened to vague and unreliable tales concerning Florida.

The United States Department of Agriculture issued 26,696,806 copies of bulletins and circulars during the year ending October 31, 1926.

The good farmer farms because he likes farming and because he can make money at it.

Power and Labor 40==60 Per Cent Total Cost

Resume from Bulletin "The Tractor on California Farms", By L. J. Fletcher and C. D. Kinsman, in California Citrograph

"Cost of power and labor for crop productions in California amounts on the average to approximately a quarter of a billion dollars annually, or between 40 and 60 per cent of the total cost. Of this amount approximately \$105,000,000 is expended for power and \$145,000,000 for labor. This means an average annual cost for these items of about \$1,800 per farm, or \$20 per acre of improved land. For this reason, the farm operator is very much interested in utilizing the most effective labor saving devices and practices available and in selecting that type and size of power equipment that will give the most economical results."

The above quotation is the opening paragraph of bulletin 415, "The Tractor on California Farms," written by L. J. Fletcher, associate professor of agricultural engineering in the experiment station, and C. D. Kinsman, agricultural engineer, division of agricultural engineering, bureau of public roads, U. S. department of agriculture. This bulletin has recently been issued by the university printing office. The material contained in this bulletin was based on data obtained by replies to questionnaires mailed in 1924 to all known tractor owners in the state, and from contact with tractor owners at short courses and in connection with other extension activities. It should be borne in mind that the figures and averages used are based on general farming with figures from citrus growers thrown into the totals and averages.

Citrus growers will be interested in the bulletin itself, which contains much more detailed and complete information than can be given here. A copy may be secured by writing directly to the university of California at Berkeley.

Some salient points of interest discussed by the authors, Mr. Fletcher and Mr. Kinsman, follow. This is necessarily a brief resume of the 35-page booklet, which contains some 23 half tone illustrations and four line charts, as well as several tables giving costs and comparisons on tractor operation.

"In general," the authors state, "the tractor should be economically employed more hours per year, thus

reducing the cost per hour by distributing the fixed charges over a longer period of use."

In determining the power requirement and choice of equipment, each farm is an individual problem, states the bulletin, because of variation in the management and mechanical skill and personal likes and dislikes of the farm operator; differences in type of farming and in practices followed in caring for and handling the individual crops; size, topography and soil conditions of the farm, plans for future development; relative costs of labor and of the various kinds of available power, the ability of any one kind of power to do all of the necessary field work; climatic conditions, such as high temperatures at time of power application; available capital, and other occupations, if any, of the farm operator. Since each kind of power has its advantages and disadvantages, each factor should be weighed in proportion to its relative importance as applied to the particular farm in question.

"The personal factor," the authors declare, "is a very important item in the choice of power. Some farm operators are mechanically inclined and much prefer tractor power if the other factors nearly balance, while others have a personal liking for animals and prefer to use that type of power under the same circumstances.

"Fencing demands may be somewhat less when tractor power is employed," the authors state.

Again quoting from the bulletin: "In some cases and particularly on the smaller fruit ranches, the farm operator devotes only part of his time to farm work, occasionally being engaged in some other occupation during the remainder of the year. In such cases the tractor has an advantage over animal power since this type of power requires no care or attention while idle."

The profit derived from use of a tractor may be due to decreasing expense of farm power operation, to a better quality of work accomplished, and to doing some seasonal work more quickly and at more nearly the proper time than was possible with methods previously employed.

Owing to the extensive use of tractors in California, most dealers

can now give a close estimate of the amount of the different kinds of work that their tractors will do per hour under the conditions encountered in each locality.

In purchasing a tractor, the buyer, after a certain make is tentatively decided upon, should determine next the approximate number of hours that it will be used annually in doing the work on the farm. In many cases the soundness of the investment depends very much upon the amount of time the tractor is to be used.

Data secured from questionnaires and other sources indicate that the average tractor in California is operated about 650 hours per year. However, many of the more successful farmers keep their tractors busy from 1000 to 2000 hours per year, thus materially reducing cost of operation.

When a tractor is used only 300 or 400 hours per year, the fixed charges such as interest, depreciation, and repairs due to age, housing and taxes, amount to more than the operating cost; while tractors used from 1000 to 1500 hours per year show fixed charges amounting to somewhat less than one-half of the operating cost.

The tractor is every year finding new ways of serving the farm more efficiently. Belt power is taken from the tractor to drive stationary farm machines, while many new attachments are proving labor savers.

The power take-off is rapidly being adapted to many farm uses. This device consists of a flexible extension shaft fitted with couplings, universal joints, and sliding joints for transmitting power directly to the mechanism of field machines as they are pulled by the tractor. The use of this power take-off on such machines as spray-pumping outfits also saves the cost of a portable engine, the bulletin says.

Each year sees the development of new and more efficient farm tools especially built for use with tractors, and implement manufacturers are finding it necessary to change from the making of animal drawn tools to special tractor tools in order to meet the demand.

The most important factors in-

fluencing the make of tractor to buy are cost of power during the life of the tractor based upon initial cost, operating expense, repairs and probable life; design and construction of the tractor itself, including quality of materials, workmanship, accessibility, and dust exclusion; general suitability of the tractor to the kind of work to be done; general satisfaction given by the tractor after working, for a considerable period, under similar conditions on other farms; nearness of a dependable dealer who keeps a good stock of repair parts; stability and business reputation of the manufacturer.

Protection of the tractor's mechanism from dust is an important consideration under all field conditions, particularly where the soil is of an especially abrasive nature. An efficient air cleaner is the first essential in protecting a tractor from dust, and regardless of the type, should not require attention more often than once a day, say the writers. Means for proper and convenient lubrication of all parts are essential.

One of the most important matters in the selecting of wheel tractors is proper lug equipment so as to insure satisfactory traction. This especially applies to farms having sandy or very light soils. In most parts of California, a fairly long spade lug has proved most efficient on wheel machines. Track type tractors need no additional spade lugs or special tracks except on marshy land or very soft soil. Many operators do not realize the loss due to wheel slippage. If this is due to overloading, the tool may be narrowed in many cases and the load lightened.

There is usually a more or less direct relationship between the weight of a modern tractor and the amount of draft than can be exerted at the drawbar. Most of the modern tractors exert a pull equal to from 60 to 80 percent of their weight. In other words a tractor weighing 5000 pounds can usually exert a pull on the drawbar of from 3000 to 4000 pounds. As a rule, however, a tractor operating in loose soil should not be expected to pull in excess of 60 percent of its weight and still steer well and not suffer from slippage of the drivers.

Many prospective tractor owners, when discussing costs of operation, seem to be concerned chiefly with fuel and oil costs. The replies to questionnaires sent to California tractor owners indicate the fuel and oil costs on the average constitute only about one-half of the total operating costs, the other operating costs, being made up largely of in-

terest, depreciation and repairs. Some of the more successful operators have found that these last items constitute only about one-third of the total expense. A number of the latter were asked what they thought was the most essential factor in the utilization of the tractor. Some typical answers were as follows:

"Do not overload the tractor, but at the same time see that it is pulling the proper load. Avoid racing the engine and starting loads with jerks. This invariably causes rapid wear and breakage."

"Plan the work so that tractors will run as many hours as possible; and at the same time see that each tractor is made to pull the proper load and is doing the proper kind of work. The use of tools especially built for the work being done will increase the efficiency of the tractor and reduce the cost of doing the work."

"Keep the tractor clean. We have a special rack and wash our tractors each night. We are certain this keeps a large amount of dirt from working into the bearings, and it gives us a chance to inspect our tractors completely every day."

"Have but one man operate and care for the tractor. This insures more careful attention to lubrication and adjustment and permits the placing of responsibility, which it is difficult to do when more than one man operates the machine."

That attention to mechanical details is important is evidenced by the following suggestions from successful tractor owners:

"Keep the fuel and oil cans clean; drain the crank case often, the frequency depending upon the dustiness of the work."

"Watch the air cleaner. This is the most important part of the tractor as far as keeping down engine wear is concerned. See that it is functioning properly; time spent in caring for the cleaner is well invested."

"Watch the adjustment of the carburetor; keep the fuel mixture as lean as possible without heating the engine and causing lack of power. This will, to a large extent, prevent oil dilution and the forming of carbon."

"Keep all bearings in proper adjustment. Do not wait for crankshaft bearings to pound and wheel bearings to get so loose that they interfere with operation."

Practically all of the 1800 tractor owners who answered the questionnaire gave definite information concerning certain features of tractor design. Owners were practically un-

animous in mentioning the desirability of inspection plates on the engine, the value of engine governors, and adjustable drawbars; 83 percent desired a service brake, and 90 percent a clutch brake; 50 percent preferred three forward speeds; 45 percent two, and only 5 percent were satisfied with one speed. Of those answering, 98 percent indicated a desire for an impulse starter coupling on the magneto. Fourteen percent stated that their service manuals were not satisfactory, the main reasons being that they were too technical; written to cover older models and made no reference to new parts, lacking in detail and did not explain how to get at and repair inaccessible parts; and without lubrication charts, there being oiling places mentioned which could not be found on the tractor.

The total amount of primary power used on farms in California amounts to approximately two million horsepower, and the horsepower hours* developed annually by this power are over one billion. Though the cost of this power varies considerably, the average is just about 9c per horsepower hour and the total costs for all kinds used amounts to approximately \$100,000,000 per year.

A comparison of the approximate amount and costs of animal power as compared with tractor power on farms in California, as well as electric motors, stationary engines, windmills and motortrucks is given by the authors. There are approximately 305,000 horses and mules in service on farms in California. These units have a primary horsepower average of one, or a total of 305,500. The average horsepower hours per primary horsepower per year is 650 and the horsepower hours per year totals 198,575,000, which is 17% of the total number of horsepower hours used on California farms per year. The cost per horsepower hour is something over \$45,000,000 per year, or 23c per unit.

There are 35,000 tractors in use on farms in California, with an average primary horsepower per unit of 13 (drawbar rating), or a total of 455,000 primary horsepower. The average horsepower hours per primary horsepower per year is 600, or a total for the 35,000 units of 21,300,000, which is 23% of the power produced annually. The cost of tractors per horsepower hour is given as 10c which includes belt work, costing about one-half that amount, and the total annual cost is over \$27,000,000 per year. Animal power fur-

Continued on page 26

The Citrus Industry

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GROVE CALENDAR FOR APRIL

Timely Suggestions for Grove Work During the Present Month

Continue frequent cultivation of groves.
Watch for rust mites; if found in numbers spray or dust with sulphur immediately.

Spray to combat melanose with 3-3-50 Bordeaux-oil emulsion (1 per cent oil).

Spray peaches with "self-boiled" lime-sulphur (8-8-50) and lead arsenate to control brown rot and curculio.

Pick up peach drops.

Continue clean cultivation of pecans with disc harrow. Spray big trees every two weeks to control disease.

PLENTY OF WORK FOR ALL

The suggestion has been put forward very seriously that The Florida State Horticultural Society is in part delinquent in its duty in not taking on more and more varied work; that it should materially add to the scope of its efforts.

We doubt very much if that suggestion will meet with any great favor from those citrus growers who have long been members of the Horticultural Society, and who have had to do with shaping the policies of that organization over a period of years. For more than a third

of a century the Horticultural Society has been the one common meeting place for the citrus growers of all parts of Florida to gather and together study their growing problems. The dissemination of knowledge resulting from these annual meetings has been of incalculable value; and the specialization by the organization undoubtedly has been responsible for its continued vigor and long life. Today the Florida State Horticultural Society is perhaps stronger than at any previous time in its career, and it has seen many organizations and proposed organizations of the growers come and go.

The suggestion that the Horticultural Society shall take up the work which in California is sponsored by the Citrus League of that state seems to be of very doubtful value.

Why should it?

The charter and by-laws of The Growers and Shippers League of Florida, according to Frank Kay Anderson, who wrote it, are simply a paraphrase of the charter and by-laws of the California Citrus League. The Growers and Shippers League up to now, and for some months yet to come, has been, and will be, exclusively occupied with traffic and rate problems, more particularly the now celebrated Line-Haul Rate Case which involved a complete readjustment of freight rates on Florida fruits and vegetables and is in itself of the most vital importance. It is well to stick to one job and to see it through; but if, when this Line-Haul case has been disposed of, it is felt desirable that the Growers and Shippers League of Florida go ahead and broaden its scope, the machinery has been provided and need only to be fitted to such additional work.

The Florida State Horticultural Society, the Growers and Shippers League of Florida, and the Fruitmen's Club, each in its way, are performing most valuable services to the citrus business of Florida. Each realizes fully the value of the work of the others, and will be most careful to avoid duplication of effort.

These other organizations are comparatively recent, but are functioning splendidly; and it was the spirit of get-together which first found expression in the ranks of the Horticultural Society which has made the active functioning of these others possible.

Florida ought to know the force of the argument which concerns "a house divided," because for many, many years Florida suffered all the penalties which followed division of opinion, and inability of its various citrus factors to work together. Now that this has been changed, Florida is going to be extremely chary of tinkering with the machinery which enables the coordination of effort for the common good.

HORTICULTURAL SOCIETY MEETING

It is particularly fitting that the annual meeting of the Florida State Horticultural Society should be held at Bradenton, near the home of one of the state's great horticultural nurseries. In this respect, at least, the sponsors for the meeting have chosen well. We believe that future meetings likewise should be held with reference to the proximity to nurseries where personal study of many subjects may be made at

first hand.

It was at Oneco, just on the borders of Bradenton, that the practice of budding citrus on Cleopatra stock originated, and members attending the meeting at Bradenton this year will have the opportunity of seeing some of the first trees budded on Cleopatra root. Much interest has been manifested in Cleopatra as a desirable root stock and many growers will doubtless take advantage of this opportunity to visit Oneco and inspect for themselves some of the first trees budded on this stock.

It is also understood that Commissioner of Agriculture Mayo will at this meeting present his report of conditions as he found them in California, recently submitted at a meeting of the Fruitmen's Club at Orlando, and that he will further enlarge upon the report already given. This is a feature of the program which will appeal to all progressive growers, as the findings of Mr. Mayo and Commissioner of Markets Rhodes will doubtless throw some light on the general citrus situation which will be of great value to Florida growers.

Every thoughtful grower recognizes that one of the most vital problems of citrus culture is the production of quality fruit. How to produce quality fruit is one of the problems which it is the province of the Florida State Horticultural Society to aid in solving. That the discussions have a direct bearing upon the solution of this problem is the promise of those in charge of the program.

SUPPLY AND DEMAND

Every producer at times is prone to question the operation of the law of supply and demand. Frequently we are apt to fly off at a tangent and declare that conditions entirely outside the operation of the law of supply and demand are the determining factors in price control. Sometimes, perhaps, we are right. Equally true, however, it is that many times we are wrong. One fact however remains, i. e. that even in cases where the law of supply and demand is not the sole determining factor, its influence is never absent.

A case in point which has recently been stressed in two quarters is that of the California lemon growers. Here is a product practically controlled so far as its marketing is concerned by one agency. It is further aided by a protective tariff which entirely eliminates competition. Yet the lemon grower is selling much of his crop at a price below the cost of production. Why? Because the demand is not equal to the supply. Of a crop of 21,000 cars of lemons produced in California, some 8,000 cars are annually forced into by-products factories where the average price ranges from 40 to 50 cents per box, against a production cost of \$1.00 per box—simply because the demand thus far created has not kept pace with the increases in production.

No such condition yet exists in regard to oranges and grapefruit. It is true, however, that the supply of low grade oranges and grapefruit is far in excess of the demand for that grade of fruit. While the better grades of these fruits are selling at fair, good and fancy prices,

low grade fruit is sold at a loss, if sold at all. The DEMAND is for high grade fruit of fancy appearance. The SUPPLY, unfortunately, runs all too much to low grade fruit of poor appearance. There is still ample demand for oranges and grapefruit. The worry of over-production which is the bane of the lemon grower, need not bother the grower of oranges and grapefruit. Such growers must, however, study to supply the KIND and QUALITY of fruit for which the demand exists. Failure to produce fruit of the quality and appearance demanded is frequently as disastrous to the orange grower as is over-production to the lemon grower. In either case it is the same old law of supply and demand which governs the price.

There is not only an adequate, but a growing demand for oranges and grapefruit of the right kind. The problem (and it is a vital problem) of the grower is to produce fruit of that kind. Having solved this problem, the grower will find his other troubles much easier to handle.

SUPPORT INVESTIGATIONAL WORK

Recognizing that the continued prosperity of the state of Florida rests upon the expansion and development of horticultural and agricultural possibilities of the state, numerous chambers of commerce and other bodies have taken steps to urge upon the legislature the need for greater appropriations for investigational work along agricultural and horticultural lines. The movement started off at Apopka in Lake county, and was quickly followed by the Chambers of Commerce at Altamonte Springs in Orange county and other similar bodies throughout the state.

Resolutions adopted and petitions presented to the legislature call for higher appropriations for the State College of Agriculture at the State University, the State Plant Board and the State Experiment Stations. These resolutions and petitions point out that the funds available for these branches of investigational work are totally inadequate for the successful operation of these departments with maximum efficiency and declare that the future welfare of the state demands that immediate steps be taken for proper support of these most important factors in the development of permanent prosperity of the state along agricultural lines.

The Citrus Industry is glad to see this action on the part of the state chambers of commerce. It hopes that the Florida State Horticultural Society at its coming meeting at Bradenton may take steps to urge this matter very strongly upon the legislature, and that the full strength and influence of the Society may be massed behind the effort to secure adequate provision for the expansion of these most worthy and important state institutions. No spirit of false economy should be permitted to rob the College of Agriculture, the State Plant Board or the State Experiment Stations of the funds necessary to develop their investigational work to the highest degree attainable.

NO CITRUS CZAR NEEDED

The Citrus Industry does not agree entirely with the premises upon which General Manager C. C. Commander of the Florida Citrus Exchange and President Louis A. Bize of the Citizens Bank and Trust Company base their conclusion, but it does agree most heartily with the conclusion itself—that a citrus czar for Florida would be worse than useless. It also agrees most heartily with the conclusion of these gentlemen that Florida's citrus problems will be solved from within the industry itself, and not by individuals from without the state who have no knowledge of the industry or its needs.

Some of the best brains in the land are connected with the citrus industry of Florida. Some of the brightest minds in the fruit world are giving their time and their best thought to the solution of the problems confronting the industry, whether those problems have to do with cultural methods, packing practices or marketing efficiency. When the solution of the growers' and shippers' problems is reached, it will be by men studying the situation from within, with full knowledge of the subject with which they have to deal; not by people from without whose only knowledge of citrus needs is gained over a grapefruit at the breakfast table.

The citrus industry of Florida needs a Moses, not a czar. When that Moses arrives, he will doubtless appear in the guise of a Florida cracker.

The Florida Grower, which for many years has been issued as a weekly agricultural and horticultural publication, now appears as a monthly. In its new form, The Grower is much improved in appearance, and as a monthly it will doubtless continue to serve its field quite as acceptably as it has as a weekly.

Have you resolved that your crop next season will be a crop of better quality than that you grew last year? If not, there is still time to "resolve."

Don't be parsimonious in the use of fertilizers—nor heedless of the reputation of the brands you use.

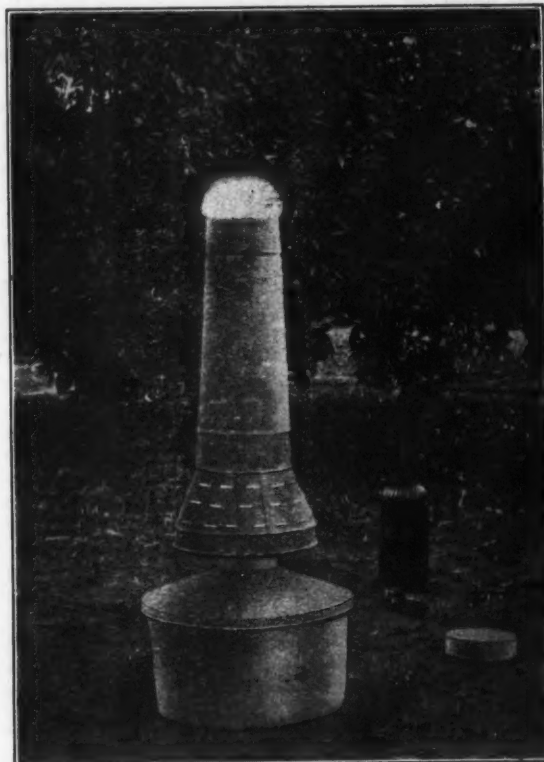
The first requisite of a profitable tree is proper nourishment. See that your trees get a well balanced ration of fertilizer at the proper seasons.

There is money in growing citrus fruits for the man who gives his grove the same attention that a successful business man gives his business.

This year, next year, and every year, it is the grower of quality fruit who banks the biggest profits per tree. Quality fruit is not grown on a starved or bug infested tree.

A good citrus grove was never worth more than it is today—and it will never be worth less.

As you spray, so shall you reap.



California Citrus Growers Purchase 100,000 Additional Scheu National Orchard Heaters for 1927!

For the 7th consecutive year the Fruit Growers Supply Company, the buying organization of the Sunkist growers, has placed a firm order for Scheu National Orchard Heaters. This year's order is for 100,000 heaters and such additional quantities as they may require.

Florida growers are profiting by the experience of those who used heaters during the cold snap of last winter—they know that orchard heating pays. The experience of fruit growers shows the advantage of equipping your grove with the latest type oil burning orchard heaters—the heaters that so successfully defended California's crops from Jack Frost's raids.

Have a Demonstration in Your Grove

Get in touch with our Florida agent, J. E. Palmer, Haines City, Florida. He will gladly demonstrate these heaters to you—explain in detail the principle of complete combustion, down draft and control regulator.

Orders must be placed early. 1927 will be a big year for orchard heating. Get your orders in early and avoid disappointment.

Scheu National Orchard Heater Company

Distributors of Orchard Heaters Manufactured by
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Get our book "Frost Protection". It's Free.

Write your name on the margin

Limes the Coming Fruit of Florida

By James N. Foreman, St. Petersburg, Florida

To my mind there is nothing in fruit juice drinks which can begin to compare with the lime when healthfulness and refreshing flavor is considered. Many people find limeade healthful and refreshing who are unable to drink lemonade. I am personally acquainted with a gentleman from Tennessee who tells me that he finds that limeade agrees with him while he is unable to use lemonade on account of the condition of his stomach. I attribute this to the fact that the lime contains much more phosphate than the lemon which counteracts the acid and makes the drink not only more palatable but also more healthful.

I have no quarrel with lemon, orange or grapefruit—I like them all—but when one has studied the citrus fruit as I have and knows the possibilities of the lime as I do, I believe that they will agree with me that limes are soon to be a leading fruit in Florida by reason of the health-giving qualities and the money-making possibilities.

Lime trees will do well on any soil

on which other citrus trees will grow and may be planted much closer, making 81 trees to the acre. These trees on proper root stock will yield \$30 to \$60 per tree, depending upon the care, age and price of fruit, and the lime is cheaper now than it will ever be in the future.

"This is too good to be true—too much money per acre—" the reader may say. Alright, I can prove my statement by my own experience as a lime grower and by that of others who have grown limes in this vicinity. While the culture of limes in Florida is only in its infancy, the fact remains that already limes have been shipped out of the state by the car load and it will be only a few years until they are shipped out by the train load. People are just beginning to appreciate the lime at its true worth as the basis for a most popular summer beverage and the demand for the fruit is far in excess of the present supply. I believe that the lime is destined soon to take its proper place as a leader among

citrus fruits and as a money making crop for Florida growers.

GROVE IN HIGHLANDS IS SOLD FOR \$50,000

One of the most important grove deals to be consummated this season was announced by E. L. Haskins, of the realty firm of Haskins and Bailey, Winter Haven, in the sale of the Erwin grove near Star Lake, on the Scenic Highlands, 12 miles southeast of Winter Haven, to C. L. Bundy, of Philadelphia. The grove consists of 20-year-old trees. The price was said to have been around the \$50,000 mark.

American Forest Week will be observed by the United States and Canada this year from April 24-30. There is more interest in forests and the forest work than ever before.

Electricity is slowly but gradually assuming a place of greater importance in rural communities. It is estimated that half of the farm work could be lightened by the use of electricity.

About 11,000 rural boys and girls of Florida are enrolled in club work under the supervision of their county and home demonstration agents.

Splitting of fruit caused by Dieback and Ammoniation can be stopped by the use of

**NICHOLS
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BLUESTONE**

(Copper Sulphate)

With the proper care and foresight you can make this your most profitable year. The use of Nichols Triangle Brand Bluestone is your best insurance against loss in your grove operations. It is the brand most generally used by Citrus growers and Truckers for Dieback control and the preparation of home made Bordeaux Mixtures.

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History and Status of Fumigation of Citrus Groves

By William Moore, Director of Entomological Research, American Cyanamid Sales Company

In 1886, the citrus industry of California was seriously threatened by the destructive Cottony Cushion scale. After various other methods of control had failed, fumigation with hydrocyanic acid gas proved effective. The Cottony Cushion scale was later controlled by the introduction of a ladybird beetle from Australia but fumigation of citrus trees continued since it had been shown to be an effective remedy for other insect pests of citrus.

Many unsuccessful attempts were made to introduce fumigation in Florida. These attempts were failures primarily because of the heavy dews and the general wet condition of the trees at night when fumigation is normally practiced.

A few years ago, a new method of

method just adapted to Florida conditions. Its value, as compared with spraying, has been studied and decided in all of the important citrus areas of the World. In order that the Florida citrus grower may have available the experiences in the different countries, a series of quotations from the published records will be presented.

South Africa

One of the first foreign countries to try out fumigation of citrus trees for the control of the scale insects was South Africa. C. P. Lounsbury, Government Entomologist of the Cape of Good Hope, stated in the Cape Agricultural Journal of December 8, 1898, that "All over the colony, fumigation with hydrocyanic acid gas is rapidly becoming recog-

of New South Wales, published a paper in the Agricultural Gazette of August, 1899, on experiments in spraying and fumigation for Red and other scale insects of citrus trees. He sums up the results of these experiments as follows:

"It has been proved that it will take about six sprayings to keep orchards in the coastal districts clean, while in the interior from one to two will generally be found sufficient."

"If each of the trees were to receive 6 sprayings a year, the cost would be for the larger tree, 7 pence; and 6 pence for the smaller, by which it will be seen that fumigating the larger tree (with 1 spraying) costs 2 pence more than for the 6 sprayings. In the case of the smaller tree, there is only a fraction of a



Fumigation in Young Citrus Groves

fumigation with hydrocyanic acid gas was discovered, namely—the use of Cyanogas Calcium Cyanide. This is a grayish dust which gives off hydrocyanic acid gas upon exposure to the air. A tent is placed over the tree and the dust is blown under the tent. The dust particles slowly give off a dry hydrocyanic acid gas in every part of the tent, thus insuring uniform concentrations. This method permits of daylight fumigations and hence makes fumigation with hydrocyanic acid possible in Florida. During the past year, so many fumigations have been carried on in various parts of Florida that probably every grower is familiar with the method. The growers, however, view fumigation as a new method of controlling citrus insects and wish to know how it compares in effectiveness and cost with the present method of spraying. Instead of being a new method, it really is an old and established

nized as the best and withal the cheapest means for suppressing the scale insect enemies of citrus trees." Twenty-two years later he has not altered his ideas, since he writes in the Journal of the Department of Agriculture of the Union of South Africa for May, 1921, "Fumigation with hydrocyanic acid gas is by far the most efficient and, in the end, the cheapest remedy for the suppression of Red Scale and other 'hard' scale insects in commercial plantings of citrus trees." Today, fumigation with hydrocyanic acid gas is regularly employed in South Africa, some fumigators using sodium cyanide as the source of the hydrocyanic acid while others use liquid hydrocyanic acid or Cyanogas.

Australia

Of the two most important citrus areas in Australia, one is located in New South Wales and the other in Victoria. W. J. Allen, Fruit Expert

difference. I would, therefore, give the preference to fumigation, because the trees are not in any way damaged by the fumes unless, maybe, in the case of a few of the tender leaves, while the solution used in the sprays must to a certain extent close the pores of the tree and slightly weaken it."

The experience of practical growers bears out the statement of the Government Experts as shown by the following extract from an article published in the Agricultural Gazette of New South Wales of October, 1926, as the experience of a grower with fumigation.

"During the 1924 season, one of the soldier settlers close to Sterculia, Mr. H. E. Ewins, decided to try fumigation on a few trees. He was one of those who had sprayed most conscientiously, and had actually hired a power sprayer with the hope of doing

Continued on page 21

BLUE GOOSE NEWS

Monthly News of American Fruit Growers Inc.



Edited by The Growers Service Department

VOLUME 1—No. 11.

ORLANDO, FLORIDA, APRIL, 1, 1927

PAGE 1

SPREADING FAME OF BLUE GOOSE GRAPEFRUIT

An interesting visitor recently called at the Orlando offices of the American Fruit Growers Inc. He was Mr. Delos De Briggs, at the time stopping in Orlando, and he came to inquire concerning Blue Goose grapefruit at the instance of his sister, Mme. A.E. Valois in Paris, whose address is care Morgan & Co., 14 Place Vendome.

In a letter to Mr. De Briggs, which he read, his sister said she was accustomed to eating a portion of Blue Goose grapefruit each morning. She wanted to know why it was called Blue Goose grapefruit, and also inquired what her brother knew, if anything, concerning the origin of grapefruit. She instanced a conversation had with a prominent British general who said he had eaten Blue Goose grapefruit in Indo China, but who could not enlighten her as to the reason for its name, nor its origin.

Mr. De Briggs said his sister several times previously had mentioned Blue Goose Grapefruit in correspondence, and that apparently it was popular in certain exclusive circles in the French capital.

Mr. De Briggs was afforded the information desired, being informed, of course, that Blue Goose is simply a trade name to identify the best quality grapefruit handled by this organization, and does not indicate any particularly variety. He also was given several labels to forward to his sister as visual evidence of his pursuit of her inquiries.

In the Orlando offices the incident served to remind several of the time, about five years ago, when Mr. Edward Bok, famous as the editor of The Ladies Home Journal for many years, wrote to ask assistance in obtaining from some reliable nursery a quantity of Blue Goose orange trees for planting upon the estate surrounding the home he had just purchased at Mountain Lake near Lake Wales. Mr. Bok knows better

Continued on page 3

INTERESTING INTERVIEW UPON CITRUS BY-PRODUCTS

A man prominent in citrus growing circles, who has given considerable study to marketing methods and practices, and who has kept pace with the developments in citrus by-products recently was good enough to discuss with the representative of the BLUE GOOSE NEWS the situation as he sees it. Because of his request, he may not be specifically mentioned. Nevertheless a number of the points he made are well worth reproducing.

The growing utilization of oranges and grapefruit in by-products, according to this gentleman, promises much to the industry by allowing many growers to obtain worthwhile compensation for their culls, drops or otherwise waste fruit. The expansion of the by-products business within the last few years, beginning with Ralph Polk's pioneering of practical grapefruit canning, has been large; and considerably greater expansion is to be looked for within the next few years in the belief of well posted persons.

During the present shipping season the sum total of Florida citrus fruits which has gone into by-products is sufficient to have absorbed the entire production, in boxes, of some of the earlier years of the industry in Florida; yet it is inconsiderable when related to the total present production.

Also, according to this gentleman, it should be remembered that fruits thus to be utilized must be available to the factories at low cost in order to render their operations profitable. The total income afforded growers by sales to such manufactories is considerable; but the real profits from citrus growing still depend, and according to this authority always must depend, upon the satisfactory sale of fresh fruit.

To date canned grapefruit absorbs by far the greatest tonnage of fruit. The utilization of grapefruit for juice purposes absorbs a very considerably

VALENCIA OUTLOOK IS VERY SATISFACTORY

By F. L. Skelly

Valencia fruit

The consensus of opinion is that as of April 1st there is remaining in the state approximately 2500 cars of oranges, this including Valencias, and 3500 cars of grapefruit. Good Valencias are selling at very satisfactory prices at the present time and the demand is very active. There should be a continued good demand and satisfactory prices for the remaining crop in the state during the balance of the season.

On grapefruit the market has not shown the advance which was generally expected. However, the demand is better and prices have advanced somewhat in the larger markets, especially on fruit of good quality. Shipments have generally been heavy on grapefruit, running from 25 to 40 cars more daily than the markets are able to absorb at satisfactory prices, except on fruit that would grade US No. 1. The probabilities are, however, that the daily movement of grapefruit for the balance of the season will be more moderate. If there can be not to exceed 75 to 80 cars of grapefruit shipped daily the balance of the crop of good fruit should be moved out at very satisfactory prices.

California estimates are that they have approximately 7000 cars of Navels to go forward after April 1st and about 28,000 cars of Valencias. California Valencias will move during the Summer and Fall months.

Porto Rico has approximately 250,000 to 300,000 boxes of grapefruit remaining and their shipments will be somewhat heavier in April than they have been for the past several months. This fruit will move out during April, May and June and probably some of it in July.

less tonnage. In fact the growth of sales of bottled grapefruit juice shows but slight advance over a period of several years. The manufac-

Continued on page 2

BLUE GOOSE NEWS

OFFICIAL publication of the American Fruit Growers Inc., Growers Service Department, published the first of each month in the interest of the citrus growers of the state of Florida.

EDITORIAL ROOMS
502 Yowell-Drew Building
ORLANDO, FLORIDA



R. E. LENFEST

The sudden death of R. E. Lenfest last month, from blood poisoning resulting from a small scratch, came as a very distinct shock to Florida citrus men. His passing is a decided loss to the citrus growers of Florida.

Mr. Lenfest at no time was either directly or indirectly connected with the American Fruit Growers Inc. However, we could not fail to appreciate him as a man, and the value of the work he did in behalf of those growers he served would be hard to overestimate.

The knowledge he acquired in his long continued and tedious studies as a horticulturist was of very great value; and the dissemination of that knowledge through his personal contacts and his writings has contributed largely to a better understanding of the life, the dietary habits, and the growing characteristics of our citrus trees among the growers.

Florida has lost a splendid citizen, a loyal worker, and a most valuable human asset.

HIGH COMPLIMENT PAID BLUE GOOSE ADVERTISING

That part of the Blue Goose newspaper advertising which has been appearing in the New York newspapers has been highly complimented by a leading article in *Printers' Ink* of March 3, 1927. The article is entitled "Striking New Notes In Newspaper Illustrations" and is written by W.

(Adv.)

Livingston Larned, a staff writer for *Printers' Ink*. It is in part as follows:

"Considerable interest always takes place when a seemingly revolutionary note is injected into the art work of a newspaper series. Advertisers who display unusual care in the preparation of such campaigns may be sure of recognition. The innovation in art is not overlooked and it is safe to assert that the public is never indifferent to the physical originality of the advertising.

"A recent distinctive newspaper series received much favorable comment. It occupied large space, five columns in width by almost the full depth of the page. It was, therefore, easier to devise novel layouts and art techniques. Over three-fourths of this space was devoted to illustration, incidentally.

"Frankly, the technique was not startlingly original. It merely seemed to be, because of the space, the fine compositions, the excellence of the plates and, finally, the fact that few advertisers were handling their illustrations in this manner at the time.

"The American Fruit Growers Inc., decided to select familiar restaurants, hotels and individualized eating places, and not only show Blue Goose grapefruit and oranges in use there, but give picturesque glimpses of the environment in each case. The illustrations possessed an immaculate tidy appearance. Their atmosphere was nicely gauged to fit a food product such as the one advertised.

"The advertiser in newspapers, who would have a distinctive campaign, will do well to use certain techniques when the majority are not using them. It is an old but an effective expedient. The Blue Goose series has flashed across the horizon at a time when the outline and flat wash treatment is not being used to any appreciable extent.

"In a crowded field, where competition is intensive, newspaper campaigns such as this are visual meteors. There is no escaping them. They are commented upon and make an important impression."

INTERESTING INTERVIEW UPON CITRUS BY-PRODUCTS

Continued from page 1

ture of candy and glace peel from grapefruit is carried on in many places, though upon a much smaller scale in each instance than is the canning of grapefruit. The total utilization of grapefruit for such purposes, however, is now sufficient to be important.

The manufacture of orange marmalade continues upon a small scale, with no signs of any considerable enlargement. In the opinion of this gentleman there are no prospects for unusual expansion in this direction. In the first place the people of the United States are not a marmalade eating people to any great extent. The per capita consumption of marmalades among the British is many times that of Americans; and this British trade has for many years adequately been served by British makers who use whole cargoes of Seville oranges for the purpose. Another thing which the layman seldom recognizes, according to this grower, is that orange marmalade consists of seventy-two per cent sugar. If seventy-two per cent of the contents of the jar are sugar, and the glassware must pay freight both ways from some northern point of manufacture, it is readily seen that the production of orange marmalade in quantity holds small hope to Florida orange growers.

It is further pointed out that the difference in the consumption of marmalade between the British and American populations is hardly open to readjustment through advertising or intensive merchandising methods. The Briton arises in a cold house during a good part of the year; and is ready and eager for a heavy breakfast of sausage, hot cakes and similar heavy articles of diet. The American household, warmed by steam heat in most instances or otherwise made comfortably warm even in severe weather, wants lighter foods, even fresh fruit. In addition it is pointed out that the oranges from one or two big Florida groves could very well produce sufficient marmalade to supply a big part of the American population, so marmalade seems to hold out small hope for the utilization of any considerable quantity of fruit.

The preservation of orange juice is beginning to open up, though the total utilization of oranges for this purpose up to this time is quite unimportant. Because orange juice cannot be filtered by any known process, the utilization of orange juice has given chemists a problem which cannot yet be considered solved. Up to now, this authority says, a partial dehydration, reducing the bulk by the extraction of a certain amount of water which must later be restored for the product to be consumed, is about all which has proven practicable in this field.



Here is how a New York City retail store ties up with Blue Goose advertising, a tie-up which is of mutual benefit and mutual profit.

Many experimenters have been successful in preserving orange juice so that it will keep for a few months, and often thus have aroused the hope that they have solved the problem; but the keeping qualities developed have not been sufficient to allow the successful marketing of the product in commercial channels. One of the greatest disappointments in this direction, it is said, was the failure of completely dehydrated orange juice to keep properly. This when reduced to a dry powder gave every evidence of being a success; but after a few months inside the cans the granules were found to have run together, producing a mass somewhat like sponge rubber, making the product commercially impractical.

Orange juice vinegar has been advocated in some quarters, but to date the production has been strictly a home affair; and no data is available as to its commercial possibilities.

In the field of citrus by-products the lemon to date has decidedly the most prominent place. It has been found profitable to develop a number of products from lemons for which there is a substantial commercial de-

mand. Next comes grapefruit canning, according to this gentleman. While oranges present interesting possibilities only the partially dehydrated orange juice thus far has been developed, it is said, as a commercial product, and the question of the limitation upon the demand for this product has not yet been ascertained. The largest and most ambitious effort to develop orange by-products, which was backed by extensive magazine advertising and intensive merchandising effort, did not prove up to the financial expectations of its backers. A new, and considerable, effort in that direction is now being watched carefully by many well posted citrus authorities.

To sum up this grower's conclusions, by-products to date are most interesting to study, but seemingly they constitute the pin-money of the industry, and the main income must look to the profitable sale of fresh fruit.

SPREADING FAME OF BLUE GOOSE GRAPEFRUIT

Continued from page 1
now, but still retains his faith in

the Blue Goose label, as is each year evidenced by the extensive orders he places for the shipment of Blue Goose oranges and grapefruit to a long list of his personal friends.

World's Worst Pun

Teacher (in geography class) Johnny, give a sentence using the word "Java."

Johnny—Java find the quarter you was lookin' for?

Give Him Time

She—"Don't you love driving on a night like this?"

He—"Yes, but I thought I would wait till we got farther out in the country."—Hoo-Hooter.

For Two

Upper—"Set the alarm clock for two."

Lower—"You and who else?"

High Brow!

Bill—"My girl has too much education."

Hal—"How come?"

Bill—"She calls Child's restaurant Cafe Des Infants."—Selected.

UNIFORMLY



THE BEST

To Best Serve Florida—

While it may point with justifiable pride to having led the way in numerous reforms in marketing and advertising methods, and having inspired many improvements in packing practices, this organization has never felt that it, alone, can assume responsibility for accomplishing all which yet is needed to be done in bettering the marketing of Florida citrus fruits.

For that reason it has ever been willing to work together with any and all others for the advancement of any sound project for the benefit of the industry. Not only so, but it has at all times exhibited an ability likewise to work harmoniously, quietly and effectively, letting the credit fall where it may.

Our methods are developed, and from time to time are revised, by the most complete corps of the highest paid experts in their respective lines in the business of perishable handling. Yet we are at all times open to suggestions.

We ask only that the suggestions conform to the practical; and that they do not involve the hasty junking of the methods which have over a period of seven years proven the best yet devised in the field of fresh fruit selling. We may be willing to experiment with part or all of the relatively small amount of our own fruit which we handle; but we owe our first responsibility to that body of prosperous growers who depend upon our proper functioning for their prosperity.

We are here to serve, and fully realize that our future expansion must depend upon serving better than can others, for it is service of that character which to date has built up this organization so rapidly.

American Fruit Growers Inc.

Orlando, Florida

DEPENDABLE



QUALITY

HISTORY AND STATUS OF FUMIGATION OF CITRUS TREES

Continued from page 16

more effective work, but sufficient scale still escaped to re-infect the orchard at once. Indeed, it is re-infection that constitutes the main trouble with red scale. So rapidly does this insect multiply that a 70 per cent kill is of little value, the remaining specimens breeding up and re-infesting the trees in a few weeks. What is required, therefore, is a treatment that will give a thoroly good 'kill'. The results on the few trees fumigated by Mr. Ewins in 1924 were so outstanding that he had no difficulty in deciding it was a far more effective treatment than spraying, but the re-infection from surrounding trees indicated that the real solution of the problem lay in the direction of fumigation of the whole block. That first trial was with what is known as 'pot fumigation', but the damage to the tent material made it so expensive, to say nothing of the danger of severe burn on hands and clothes, that a trial of 'dust fumigation' was arranged.

"Mr. Ewins proceeded with the fumigation of his whole block in the early months of 1925, and followed that up at once by a similar treatment of the orchard of his neighbor, Mr. F. B. Mackenzie, some of whose trees were then in a very bad way. The recovery of these trees (situated close to the main road and the object of continual remark by passers-by) created the greatest interest, and must have been a factor in leading the Department of Lands to offer to fumigate the settlers' orchards on terms particularly welcome to men whose labours of years appeared to be swept away.

"It was of obvious importance that if a large number of trees were to be fumigated they should be within a defined area, so that the risk of re-infection from non-treated areas might be minimized. Twelve soldier settlers were accordingly found whose 12,000 trees were practically in adjoining blocks, and a contract was made with Messrs. Ewins and Mackenzie to fumigate the whole lot at 7d. per tree, the Department paying for the work and recovering from the settlers on extended terms.

"So satisfactory was the result of that year's operations that in January, 1926, the Lands Department made a fresh contract with the same partners for the fumigation of an additional 19,000 trees. By this time the effects of the treatment on the trees fumigated in 1925 were so apparent that many private growers in the district were letting contracts

THE CITRUS INDUSTRY

for similar work on their orchards, and in addition to those treated on the settlements at least 30,000 trees have been fumigated in the present year by various contractors."

The experiences of Victoria in regard to fumigation and spraying were similar to that of New South Wales.

Victoria has an active Citrus Association interested in clean fruit. They were instrumental in having the regulations formed under the Vegetation Diseases Act changed to require that groves infested with scale must be fumigated or sprayed at the discretion of the local supervisor. The Citrus News, the official paper of the Association, in the March issue of 1926 explains these regulations in the following words:

"The regulations provide that orchards must be kept clean of scale and other disease by spraying or fumigation and power is given the officials to compulsorily fumigate orchards if the owners fail to demonstrate that they are themselves taking the most effective measures." The act provides that fruit effected by diseases or pests "either alive or dead" be prohibited from sale.

Egypt

Technical and Scientific Service Bulletin No. 45 of the Ministry of Agriculture of Egypt outlines the attitude of this country toward fumigation.

"Very shortly after the foundation of a Department of Agriculture in 1911, Dr. L. H. Gough, the first entomologist to be appointed, introduced the process of fumigation with hydrocyanic acid gas previously employed in America and elsewhere. In this country fumigation has proved to be the only really satisfactory method of treatment." A table is given showing how the number of trees fumigated from 2000 in 1911-12 to 388,236 in 1920-21. "It was some years before the cultivators became convinced of the necessity of fumigation, but so fully is the value of it now realized that it is only shortage of staff and materials that prevents the number of gardens treated being considerably increased. Owing to the extremely poisonous nature of the chemicals used, all fumigation was carried out until recently by the Ministry of Agriculture at a fixed inclusive fee—". "This cost is not expensive when the yield per feddan is probably at least L. E. 180 on reasonably good, well-cultivated land, and it must always be remembered that if fumigation is not practiced the value of the crop will fall to about a fifth of this in three or four years time."

Twenty-one

"Fumigation is carried out by the Ministry for the benefit of the cultivators at the lowest possible figure and the fees paid do not quite cover

THERE IS A DIFFERENCE IN FERTILIZER

The next application of Fertilizer that you apply to your grove will mean considerable as to the Quality of Fruit

Use

Orange Belt Brands



"Quality Fertilizers"

for

"Quality Fruit"

The Best There Is In Dentistry

FREE EXAMINATION - OUT OF TOWN PATIENTS FINISHED SAME DAY

Dr. W. Parker's
Dental Offices

202-4-6 Ferlita Bldg.
Tampa, Florida
Corner Franklin & Twigg
Hours: 8:30-7:00
Sundays: 10:00-1:00

the actual cost of fumigation. It is probably not very widely recognized that the Government bears a part of the cost of fumigation of every tree in order to foster the cultivation of citrus trees."

After discussion of the suspicion with which fumigation was at first viewed, it is stated that "Propaganda over a period of years removed this difficulty to a great extent, but it was not until the system of compulsory areas was introduced that the real value of fumigation dawned upon the average cultivator. Since the introduction of that system, the fumigation campaign has received a tremendous stimulus, and it is almost impossible today to cope with the demand."

Spain

The start of fumigation in Spain is given in a paper on the insects of citrus by Leopoldo de Salas Y Amat, published in 1914.

"1. That the problem of applying hydrocyanic acid as a medium for controlling citrus insects in Spain can be considered as completely solved.

"2. That fumigations in addition do not offer dangers which make the use unacceptable in practice and constitute the most economical method yet known in relation to the results obtained.

"3. That the pest "Poll Roig" (Spanish Red Scale) in Spain can be considered as actually conquered by this method.

"4. That other citrus pests can be controlled at the same time by hydrocyanic acid fumigation." Fumigation has been so successful in Spain that it is now the recognized method of control and in 1925 it is estimated that 750,000 trees were fumigated.

Italy

Altho attempts have been made to fumigate lemon trees in Italy, they were not successful due to the close planting of the trees which a number of trees are inclosed in a large tent instead of covering each individual tree. This method has apparently solved the difficulty which prevented fumigation in Italy. The development has been too recent to give here a comparison of the results obtained by fumigation with those obtained by the lime sulphur sprays in use in Italy.

Palestine

An account of fumigation in Palestine is given by the Government Entomologist, Mr. G. E. Bodkin, in the Bulletin of Entomological Research for October, 1925. He points out that the most important scale insect of citrus is an insect locally known as the Black Scale but quite

THE CITRUS INDUSTRY

distinct from the Black Scale of California. This species is primarily found on the fruit and leaves but seldom on the twigs or branches. "The injury to infested trees is great; leaves drop off prematurely, the fruit becomes undersized and unsightly, and the whole tree bears each year a smaller crop of fruit. Oranges infested with Black Scale fetch a low price on the market; the only alternative being to expend money on labour in removing the scale by hand prior to marketing." "Fumigation of citrus trees in Palestine was inaugurated on a correct scientific basis by the writer early in 1923." "By fumigating a heavily-infested garden during two successive seasons, 100% elimination of the Black Scale has been obtained. These results have been observed by examination of the trees 4-5 months after treatment and at the time when Black Scale, if present, will be at its maximum. Increased growth of foliage and superior yields of clean fruit have also been noted."

"The recent institution in Palestine of a Plant Protection Ordinance has made the prosecution of the campaign against the Black Scale a somewhat easier matter. In accordance with similar Ordinances elsewhere, the Palestine Government is now empowered, where necessary, to compel a cultivator to control the spread of certain pests (of which Black Scale is one) in the lands under his occupation, and it is proposed to carry on fumigation work under this Ordinance in the future."

California

In California, the fumigation of citrus trees has been the standard method of control of citrus insects, since the development of hydrocyanic acid gas as a fumigant in 1886. Recently, in certain areas, the best results have not been obtained from fumigations. This has been explained on the basis that apparently resistant strains of scales had developed. Many varieties of oil and oil spray combinations have been tried. The latest statement on the situation in California is given in Bulletin No. 3 of the California Fruit Growers' Exchange from which the following quotations are given.

"The California Fruit Growers Exchange has for a number of years, through its Bureau of Pest Control, been engaged in a study of the merits of the various sprays used commercially on citrus trees in California as compared to fumigation for control of our more important scale pests and for the red spider. Particularly has this study been centered on the so-called resistant scales, the

black in the interior areas eastward from Los Angeles and the red on lemons in the more coastwise Los Angeles and Orange County districts. The result of this work for the past season of 1926 is presented in this bulletin and is, we believe, a statement of facts of the scale problem as it exists today."

California Red Scale

The resistant type of the California Red Scale is found in the coastal regions known as the Whittier-Orange County district occurring on both lemons and oranges. After discussion of the observations on the various methods of control, the situation is summed up as follows:

"Summing up the problem of resistant red scale control on lemons, it would appear that our present information is about as follows:

"Heavy winter fumigation is the most effective and at the same time safe method at present known.

"Certain types of oil spray followed within a very short time by a heavy fumigation appears to give excellent scale kill, but the use of these combinations should be limited largely by the influence of the spray material on the tree and its subsequent effect on the grading of fruit in the packing house.

"Red scale on oranges in the Whittier-Orange County district has been controllable by fumigation, even though the scale is of the resistant type. Dosages of 100 per cent (18 cc) or 110 per cent (20cc) have been commonly used. Where unsafe to use such heavy dosages during the regular fumigation season, work should be deferred until winter when such dosages are applied with safety. We recommend fumigation as the preferred method of controlling red scale on oranges in the Whittier-Orange County district."

Black Scale

The Black Scale is classed as resistant in Eastern Los Angeles County and Western San Bernardino County.

"The black scale has been particularly resistant to fumigation in the interior citrus area eastward from Los Angeles City to a little beyond Upland. In some parts of this area fumigation still gives satisfactory results in most cases, noticeably Baldwin Park, Irwindale, Valencia Heights, Walnut, lower Pomona and upper Sierra Madre. Wherever fumigation has controlled the black scale in the past we strongly recommend that fumigation be continued this year. However, where growers in this district have failed to control the black scale by a single fumigation

Continued on page 24

Growth through Service!



RENOV

ATLANTIC & GULF FERTILIZER CO.

NEW YORK, N. Y.

HISTORY AND STATUS OF FUMIGATION OF CITRUS TREES

Continued from page 22

we recommend the treatments brought out in the following discussion."

After discussion of the findings in this area the following recommendations are given for the Resistant Black Scale:

"FOR ORCHARDS HEAVILY INFESTED WITH RESISTANT BLACK SCALE DOUBLE TREATMENT is the one dependable method of accomplishing satisfactory control. Once the scale is reduced to a light infestation it might be handled in the future by a single treatment of the best insecticide. For double treatment our first recommendation is early fumigation, followed by oil and lime sulphur in mid-autumn. This, while not superior to a double spray in control on the lower part of the tree, does leave the top in a decidedly better condition. It controls the red scale, which a double spray cannot be depended upon to do; we also believe it better for the tree than a double spray program.

"WHERE ONLY A VERY LIGHT INFESTATION OF SCALE IS PRESENT. (If the trees were sprayed last year, examine the tops to be sure the infestation is light.) Oil and lime sulphur in mid-autumn has given the best average results for the past three years of any One Application of the various materials used."

Citricola or Gray Scale

Another scale found in California is the Citricola Scale. The position of fumigation is outlined in following quotation:

"The Citricola scale is a serious pest in Riverside and San Bernardino Counties as well as in Central California. The most effective method of handling the insect is by fumigation with 100 to 110 per cent schedule in July and August. In Tulare County fumigation is guaranteed to control the scale. Ordinarily a proper fumigation will keep orchards commercially clean for 2 to 3 years."

Purple Scale

The California method of controlling the Purple Scale is defined as follows:

"Fumigation is the most satisfactory method at present known of handling the purple scale. The dosage should be 100 per cent. A 75 per cent dosage is likely to lead to poor results. Our own experience has been that August to October is the preferred season for satisfactory results in purple scale control. The grower who waits until late November or December to avoid fumigating over the old crop and then uses a

THE CITRUS INDUSTRY

light dosage is likely to be disappointed with his results. Fumigate early and then use as heavy dosage as consistent with safety to the trees."

A careful reading of the quotations from the findings of the California Fruit Growers Exchange indicate that fumigation at the present time is holding its own in California as it has for the past 40 years.

WATCH TANGERINES AND YOUNG TREES FOR APHIDS

The citrus aphid has not yet recovered from the setback received during the freezes of January, but it is increasing rapidly and is to be found generally distributed on young growth, says J. R. Watson, entomologist of the Florida Experiment Station. The first flush on most orange trees is now out of danger. But indications are that many tangerines are going to suffer damage unless control measures are taken. Aphids are now producing winged ones in large numbers, which means that they are going to fly around a great deal, so that growers who have had no aphids up to the present time are liable to find trees infested from surrounding groves. Tangerines on

April, 1927

which the growth has not yet hardened are liable to receive damage as the aphids will fly to them from hardening oranges.

Young trees severely damaged by the cold alsh should be carefully protected from aphids. Such trees probably will have no resting period in the spring, but there will be more or less young growth on some trees at all times. If the small amount of growth which they may be able to put out since the freeze should be allowed to be stunted by the aphids the resulting shock would be hard on the trees. It may result in the death of many of them.

Club boys and girls of Florida have their own paper, Florida Pepper. It is published by the Agricultural Extension Division and State Home Demonstration Department and distributed to all club members.

Modern hog-lot equipment is described in Farmers' Bulletin 1490-F, a copy of which can be obtained from the United States Department of Agriculture.

Every Florida farmer should plan to "eat fruit from his own vine and fig tree" this year.

Here is the Better Spray you've been looking for!

RENOL is the spray to use if you want the best results. Years of study and thousands of experiments have made Renol the most effective spray for the control of insects and the general stimulation of trees.

RENOL costs less than other sprays because of its economy in use. Renol deals death by suffocation and by destroying the tissues of the insect.

RENOL is not disagreeable to use; it mixes freely with other sprays and fungicides; it purifies water; and is the most effective and quickest acting spray on the market.

Write for Booklet: "RENOL, What it is, What it does, and How it does it"



Sole Distributors

ATLANTIC & GULF FERTILIZER CO.

JACKSONVILLE FLORIDA

SUGGESTIONS FOR CARE OF CITRUS GROVES IN SUMMER

USE IDEAL INSECTICIDES

THE QUALITY PRODUCTS

IN YOUR SUMMER SPRAYING AND DUSTING PROGRAM

FASCO FLO-OIL, IDEAL LIME SULPHUR SOLUTION, IDEAL BORDEAUX OIL EMULSION

PERFECTION BRAND DUSTING SULPHUR

DURING APRIL, Watch for Rust Mites and Red Spiders. They can be best controlled with Ideal Lime Sulphur Solution or Perfection Brand Dusting Sulphur—APRIL is a critical time for Aphis—Control them with Black Leaf 40—Black Leaf Nicotine Dust or make your own dust in a Bean Duster and save money.

BEFORE MAY FIRST, To prevent melanose spray with Ideal Bordeaux Oil Emulsion. Where this spraying is done be certain to spray with Fasco Flo-Oil about July first. Failure to do this may cause heavy Purple Scale infestation later.

IN MAY, Spray both grapefruit and orange trees if scale insects or white flies are present with Fasco Flo-Oil the Ideal Oil Emulsion spray for control of these insects.

IN JUNE, Spray oranges with Ideal Lime Sulphur Solution or dust with Perfection Dusting Sulphur to control Rust Mite and Red Spider.

GENERAL: While the time of application of the above SPRAYS and DUSTS are approximate and represent the critical periods for development of these diseases and pests the exact time is best set by observation of the development and distribution of the particular disease or pest.

In APRIL or early May, apply IDEAL BLUESTONE to the soil around trees that have die-back or in which it is suspected that dieback will develop. This is a specific for this trouble.

The FLORIDA RED SCALE frequently becomes prevalent on both oranges and grapefruit during the SUMMER SEASON. They should be sprayed at once when found with FASCO FLO-OIL, and repeated, sprayings made at six weeks intervals until they are perfectly controlled. Thorough spraying will eliminate frequent applications.

MAKE USE OF OUR SERVICE DEPARTMENT

B. F. FLOYD: Horticulturist

JULIAN J. CULVER: Entomologist

DR. MORTIMER D. LEONARD: Entomologist and Pathologist

FLORIDA AGRICULTURAL SUPPLY COMPANY

ORLANDO

General Offices

JACKSONVILLE

Factory

POWER AND LABOR

40-80% TOTAL COST

Continued from page 11

nishes 17% of the total power used, while electric motors furnish 47%; tractors, 23%; stationary engines, 7%; windmills, 1%, and motor trucks, 5%. Of the kinds of power shown, horses, mules and tractors are those used primarily for field work, about 75% of the animal and 95% of the tractor power developed being used for this purpose. Electric motors represent the largest quantity of power used on farms in California, but its use consists almost entirely of stationary work, such as pumping, irrigation and drainage.

The number of hours a tractor is used annually has a very decided bearing on the cost per unit of power utilized, since the fixed costs must be prorated against the power actually developed. The following data for cost of tractor operation is based upon replies obtained from about 500 tractor owners, practically all prominent makes of tractors being represented.

Approximate Cost of Tractor Power in California under 1926 Conditions*
Average annual fixed cost of keeping a tractor per rated drawbar horsepower ... \$21.00**
Average direct operating costs per drawbar horsepower hour developed by

Tractor:				
Fuel, lubricating oil and labor for servicing tractor	-	-	-	\$.04
Depreciation and repairs due directly to use	-	-	-	.02
Total	-	-	-	\$.06
Total fixed and direct operating costs per drawbar horsepower hour and per year for different amounts tractor is used annually:				
H. P. Hours	Cents	Cents	Cents	Dollars
100	21.0	6.0	27.0	\$ 21.00
200	10.5	6.0	16.5	27.00
300	7.0	6.0	13.0	33.00
400	5.3	6.0	11.3	39.00
500	4.2	6.0	10.2	45.20
600	3.5	6.0	9.5	51.00
800	2.6	6.0	8.6	56.00
1,000	2.1	6.0	8.1	61.00
1,200	1.8	6.0	7.8	66.80
1,500	1.4	6.0	7.4	71.00
2,000	1.1	6.0	7.1	78.00
2,500	0.8	6.0	6.8	84.00

*Wages of operator while in field not included.

**The fixed costs include interest, taxes, insurance, and housing computed at 10 per cent on an average investment of \$57.00, and depreciation and repairs due to age, at 14 per cent on an average first cost of \$105.00 per rated drawbar horsepower of the tractor.

The useful life of the average farm work animal is probably about 10 years and the average such an animal is used annually in California is about 1,300 hours, during which time it develops an average of one-half horsepower hour of power per hour, or 650 horsepower hours of power per year. Estimates given by 465 tractor owners on the probable life of their machines and the amount they were used annually showed that the use of the tractors varied from less than 100 hours to more than 2,500 hours per year and the estimated life from three years to more than thirty.

THE CITRUS INDUSTRY

Grouping the reports according to the number of hours the tractors were used annually and averaging the estimates of the length of life the tractors in each group showed that while the amount of use varied from 154 hours to 2,441 hours, the average estimated life only varied from 8.72 years to 5.66 years and that the average tractor becomes obsolete after about nine years, even if it is not used at all. This means that an amount equal to about 11% of the first cost of the tractor should be included under the fixed charges to cover obsolescence and that a sufficient additional amount should be included under the operating charges to take care of the direct wear.

SPANISH ORANGE PROPAGANDA

In a report published by the Department of Commerce, Mr. C. S. Edwards, American Consul at Valencia, Spain, states that the great discredit brought upon the Spanish orange in foreign markets by reason of the large quantities of froz-

April, 1927

There has also been numerous meetings of growers and shippers.

Reasoner Brothers'

ROYAL PALM NURSERIES

takes pleasure in

welcoming

The Florida Horticultural

Society in their 40th

Annual Meeting

Bradenton---April 12-15

1927

We extend to all those in attendance a most cordial invitation to visit the Nurseries at Oneco---only six miles from your convention city.

Established 44 years ago, the Royal Palm Nurseries has had the privilege of introducing and distributing more varieties of Tropical fruits and ornamentals than any other concern in the United States.

In Citrus Fruits the Royal, Foster, and Thompson (pink Marsh Seedless) grapefruit; the Oneco Mandarin; and the Rangpur lime are among our introductions.

Reasoner Brothers'

ROYAL PALM NURSERIES

Oneco, Florida

Light Plants, Automatic
Water Plants and Electric Refrigerators
CHARLES GREENE CO.
1221 Florida Ave. Phone 3477
TAMPA, FLORIDA

The Newark Company

Incorporated
CARLOT DISTRIBUTORS
COMMISSION MERCHANTS
FRUITS AND PRODUCE
159 SO. ORANGE ST.
New Haven, Conn.

en and damaged fruit, included in shipments from Valencia, this season has given rise to propaganda aimed not only to recover prestige for Spanish oranges but to emphasize their excellence. It is also planned to arrange more orderly marketing in such a tempting condition as to permit Spanish oranges to meet growing competition in principal markets from other orange-exporting countries.

As oranges are a chief source of wealth of the Valencia region, the entire press of the region has been devoting columns to the subject

Grapefruit Canning

By J. E. Worthington, Lake Wales

Hills Brothers of Florida, a subsidiary of Hills Brothers of New York, well known packers of Dromedary Products, who own four grapefruit canneries in Florida, are now bringing their canning campaign of 1926-27 in the Sunshine State to a close. The Lake Wales plant will shut down for the season, after what Assistant General Manager E. D. Oestricher, who has been in charge of the plant, says has been a very satisfactory campaign.

The season's pack of the Lake Wales cannery was between 1,080,000 and 1,200,000 cans, or 45,000 to 50,000 cases of 24 cans each. Reduced to carloads it means 45 to 50 cars. Since all four of the company's canning plants in the state are of about equal capacity and have put out approximately the same pack this means a gross output for the season of between 4,320,000 and 4,800,000 cans or from 180,000 to 200,000 cases or from 180 to 200 carloads.

During the canning season the four plants have employed from 100 to 165 white women, girls and men, with a weekly payroll of from \$2,500 to \$3,000, or a total for the four plants of between 10,000 and \$12,000 per week.

Another feature of great economic importance attaching to the operations of the Hills Brothers of Florida in this connection is the fact that a vast amount of grapefruit which would otherwise have been a complete waste has been converted into wholesome food. The fruit used for canning is perfectly sound but due to odd size, shape or a few skin blemishes has not been available for shipment as fresh fruit.

The skin or rind of the fruit has thus far been a waste except where a few growers in the vicinity of the plants have hauled this refuse out on their land as fertilizer. It is already known that these rinds contain various chemical and other products which, it is hoped in time may be available in commercial quantities and thus increase the number of by-products of the citrus industry. Thus far, however, the research department of Hills Brothers and various other agencies have not been able to perfect processes whereby these products may be saved economically, though various ideas are still being worked on with this end in view.

Various small kitchen plants have for a number of years been using the rind of the thicker skinned grapefruit, in the preparation of various

fruit unfit for marketing for fresh confections, candied or glazed rind as it is known to the trade. It is very toothsome and is being consumed in considerable quantities by tourists who visit the state each winter and who also send many packages to friends in the north.

Similarly the manufacturer of marmalade from the unmarketable orange crop has not expended much beyond the small back kitchen plant. But even in this small way each of those engaged in the business has found a ready and profitable market for their products.

These by-products of both grapefruit and oranges is apparent susceptible of materially extended development which eventually should add greatly to the annual income from the citrus industry of the state.

Mr. Oestricher, who is assistant to General Manager A. W. Scott of the Hills Brothers Company of Florida, who has charge of the plant at Lake Wales, expects to leave soon for Woodbury, Ga., where he will have charge of a new pimento pepper canning factory which his company has just built at a cost of \$50,000.

STATE SURVEYS BED OF CALOOSAHATCHEE FOR SPAN

Assigned to make a detailed survey of the bed of the Caloosahatchee river for the new Tamiami trail bridge, recently authorized by the state highway department as a part of the trail project. Burt Luzier, state road department engineer is here to begin work.

The engineer announced that the bridge will be of concrete and will carry a 24-foot driveway, six feet wider than the present bridge. There will also be four-foot walks on either side of the span and a 90-foot draw over the ship channel in the river.

Drilling to determine the nature of the river bed will be made every 30 feet for the entire 7,000 feet of river the bridge will span, it was stated, and the survey will require approximately two months, the engineer estimated. The work of drilling will be started as soon as equipment arrives, Mr. Luzier said.

The outlook for hogs is fairly good this year; for many other crops is not very good or is bad.

Pines grow faster than most other kinds of trees and yield more profit per acre.

For a Spring Clean-Up use VOLCK

During the spring, when Scale, Crawlers and Rust Mites are most active, give your grove a thorough application of VOLCK.

This frees the trees from the pests at the time when pest-damage is most disastrous to the setting and maturing of the crop.

Moreover, VOLCK is so completely effective when properly applied, that the grower can precede the VOLCK application with an application of Bordeaux without fear that Bordeaux-damage to friendly fungi will result in heavy scale re-infestation.



VOLCK is the only oil emulsion sold in Florida covered by a guaranteed analysis. Talk with your nearest VOLCK representative now about a Spring Clean-up for trees.

California Spray-Chemical Company
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VOLCK The Scientific Spray

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The newest and finest hotel in the South, setting new standards in policy facilities and service. Rates posted in every room. Tub and shower, electric fan, steam heat, and circulating ice water in every room. Centrally located. Garage in same block. Write for booklet.

ROBERT KLOEPPPEL, Owner
W. GAINER THIGPEN, Manager

Roses to be Exhibited and Discussed at Bradenton

What is your favorite rose? What strains of roses are best suited to Florida Gardens? How should the soil be prepared for a rose bed? How should different varieties of roses be pruned? These and many other subjects pertinent to rose growing in Florida are to be discussed as a part of the program of the FLORIDA ROSE SOCIETY that holds its Second Annual Meeting in the Dixie-Grande Hotel Bradenton on Thursday April 4th at 10:00 A.M.

Among the speakers of prominence who will take part in the program is Mr. S. J. Hjort, a prominent rose grower of Thomasville, Georgia and consulting rosarian to the American Rose Society; Mrs. W. S. Selby, an amateur grower at Sarasota; G. H. Peterson, a well known rose grower of Fairlawn, N. J.; W. L. Floyd of the College of Agriculture at Gainesville; and others.

The program is to be more or less informal, giving all an opportunity to tell of experiences and to ask questions for personal benefit. Every phase of rose growing in Florida is to be considered.

The Florida Rose Society was organized at Cocoa in 1926 at the annual meeting of the Florida State Horticultural Society. The officers for 1927 are: Mrs. E. L. Lord, Gainesville, President; Mrs. S. F. Poole, Winter Haven, Vice-President; Alfred Bosanquet, Fruitland Park, Secretary; and N. A. Reasoner, Oneco, Treasurer.

The Florida Rose Society is affiliated with the American Rose Society and with the Florida State Horticultural Society and membership in the Rose Society includes membership in the two latter organizations.

Second Annual Florida Rose Show

Roses from amateur gardens, from private estates and from commercial growers are to be exhibited at the Second Annual Florida Rose Show to be held in the Women's Club Bradenton, opening on Wednesday April 13th at noon and continuing thru Thursday April 14th. Sufficient entries have already been made to assure this to be a larger and better Show than that held at Cocoa a year ago and which was quite an eye-opener for those who have thought that roses do indifferently in Florida.

Leo H. Wilson, County Agent for Manatee County, has been appointed Director of the Rose Show, and will

have full charge of the entries and placing of the exhibits.

MAYO MAKES IMPOR-

TANT RECOMMENDATIONS

Continued from page 8

they gave it up. Sixty-five per cent of the marmalade is sugar and only 11 per cent fruit, so they abandoned its manufacture entirely. They claim that if they could not manufacture orange oil they could not operate. Russet oranges will not make oil, as the oil is made from the bright clear skin, and the oil cells in the skin of the orange are only one-thirty-second part of an inch deep. It takes the skin from bright fruit to make orange oil. One-half of all money from by-products comes from the oil; the cowfeed, sell for \$3.00 a ton. The annual consumption of orange oil in the United States is only 200,000 pounds, lemon oil 600,000 pounds, grapefruit oil approximately 2,000 pounds. With all these advantages, we found some dissatisfaction among the Exchange members. They claim that 95 per cent of their membership are satisfied.

California has the advantage of a dry season which results in a greater percentage of bright fruit than Florida produces. Its citrus growers are better organized, but they are twelve days from the Eastern market. Its fruit is thicker skinned and does not have the sugar content or juice content that Florida fruit has, and Florida is three times as close to market.

The states need closer cooperation as an industry. They have a frozen fruit law, are expecting to pass at this session of the legislature a Standardization Act and a Commission Merchants license law. Florida must find a way to regulate shipments, enforce grades and keep frozen fruit off the market, and advertise to increase consumers demand. It is up to every grower and marketing agency in the state to help do it. Cal-

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ifornia can use a lot of our grapefruit and they can furnish us our lemons. This is a beneficial commercial proposition which should be worked out by both states.

Within a short time, we want to meet the Fruitman's Club and the representatives of the other marketing organizations of the state to consider these vital questions.

READ YOUR GROVE FOR PROFIT

Study your citrus trees! Examine closely the twigs, leaves and fruit! They will help to tell you what your grove needs to produce better fruit—and make a greater profit.

If the young growing branches develop gum pockets, become stained and distorted; if the leaves show brownish, hardened areas and are very coarse and abnormally long; if the fruit, too, shows resinous areas and perhaps splits, exposing the pulp—if any such signs develop in your grove, it is probably due to die-back. Prompt measures are necessary to control this disease.

Drainage, the presence of hardpan, too much or too deep cultivation are sometimes at fault. Often, however, this disease is due to poorly balanced plant food, especially to an over-supply of organic nitrogen.

In such cases authorities recommend that organic nitrogen be eliminated from the fertilizer and an increased amount of potash given.

In many instances, potash has been of great benefit in combating this disease. Even if you do not notice definite signs of die-back but are troubled with sappy, soft wood growth you will find that a liberal amount of potash in your fertilizer has a decided effect on hardening and maturing new growth.

On trees producing 10 boxes of fruit per year, from 30 to 50 lbs. of a high-grade fertilizer per tree per year is recommended. Where the yields are heavier, the application should be increased from 3 to 5 lbs. per tree per year for each additional box of fruit.

For bearing trees, spring fertilizers containing around 3% ammonia, 8% phosphoric acid, and 10% potash should give profitable results when applied in proper amounts to meet the local needs of the grove.

Plenty of Potash to be Had

Potash Importing Corporation of America

10 Bridge St., Dept. I-60, New York

Genuine German
POTASH

The Melanose Situation

Following out some investigation-al work into melanose conditions in Florida, a questionnaire was recently sent to numerous Florida citrus growers by those in charge of the investigation, in which the question was asked:

"What Should be Done for Melanose Control Under Conditions Existing This Season?"

That the interest in the control of melanose is intense was manifested by the many replies received by the investigators. These replies may be summarized as follows and are submitted for the benefit of growers in general:

What Should Be Done For Melanose Control Under Conditions Existing This Season?

1. The major portion of dead wood should be cleaned out and the trees sprayed with a Bordeaux oil preparation.
2. Spray with Bordeaux oil.
3. Prune trees as quickly as possible and be sure to cut far enough back into the green sound wood.
4. Should surely spray on account of heavy increase in dead wood.
5. Thorough pruning and thorough spraying for melanose should help conditions more than anything else this season.
6. Spray grapefruit as soon as fruit is large enough, possibly 15th to 20th of April. Avoid spraying except in groves where melanose markings have been quite severe in the past. I would not advise controlling melanose on oranges.
7. Spray thoroughly with Bordeaux oil emulsion during month of April and follow in early June with a thorough spraying of oil emulsion. Use either whale oil soap or calcium caseinate with the oil when used in mid-summer and confine spraying operations at that time to early morning hours and late afternoon hours exclusively.
8. In this section removal of dead wood primarily. In many instances there will not be sufficient fruit to warrant a spraying.
9. Prune.
10. Growers in general can ill afford to allow accumulation of dead wood and later on be penalized by increased control costs and more damage or both.
11. After a freeze like we have had prune severely into new wood and by all means give a good application of Bordeaux.
12. Prune very closely and spray with 3-3-50 Bordeaux oil two

weeks after bloom falls. Use oil spray in June to kill scale which usually follows when Bordeaux is used.

POLK FARMERS PLAN CO-OPERATIVE SALES

More than 200 farmers of Polk county met at Bartow, Saturday March 26th and planned co-operative shipments of their spring vegetables. Among the speakers were H. T. Bennett, manager of the Manatee Co-operative Growers' association, and C. W. Garner, field manager of the Federated Fruit and Vegetable Growers, Inc.

Those at the meeting represented 188 acres of potatoes, 149 acres of beans, 68 of tomatoes, 22 of cucumbers, and 15 of peppers to be handled on a co-operative basis if an association is formed.

\$25,000 LOAN FUND GIVEN TO SOUTHERN

Dr. Ludd M. Spivey, president of Southern college, announced on his return here from Jacksonville that a fund of \$25,000, drawing eight percent interest had been given to the college for a student loan fund. The donor was not announced, but Dr. Spivey said he is not a Methodist. The gift was signed over in Jacksonville.

EXPENDITURES STATE ROAD DEPARTMENT OF FLORIDA

Year	Amounts
1920	\$ 79,600.00
1921	820,707.08
1922	2,355,497.97
1923	6,247,115.47
1924	4,456,022.85
1925	5,341,199.87
1926	11,161,610.78
	\$30,461,754.02

SAN JUAN GRAPEFRUIT

A cable from the San Juan Office of the Bureau of Foreign and Domestic Commerce, dated March 11, 1927, states that 1,318,000 pounds of canned grapefruit were shipped to the United States during February. Prices are slightly stronger, and further gains and increased shipments, are anticipated within the next few weeks. A good late crop is expected, and the total crop estimate is placed at slightly below the 1925-26 yield.

Returns
8%
with
100%
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Citrus Fruits and Pineapples

Bearing citrus groves should be fertilized three times a year, spring, summer and early fall or winter.

The fertilizer should contain 4 per cent ammonia supplied by Nitrate of Soda.

The age, color and vigor of the trees determine the actual number of pounds to use per tree.

Florida State Experiments show that Nitrate of Soda may be used successfully to supply the nitrogen for young pineapple plants, as much as 500 pounds per acre in three or four applications.

Our new pamphlets on fertilizing crops will be sent you if you will cut out this advertisement, write your address in the margin, naming your principal crops, and mail to our nearest office. Our State Manager who is in touch with your local conditions may assist you to solve your fertilizing problems. (2507)

Chilean Nitrate of Soda Educational Bureau

57 William Street New York

Raleigh, N. C. New Orleans, La.
Columbia, S. C. Dallas, Tex.
Atlanta, Ga. Little Rock, Ark.
Orlando, Fla. Nashville, Tenn.
Montgomery, Ala. Columbus, Ohio
Jackson, Miss. Los Angeles, Cal.

IMPRESSIONS

By The Impressionist

A small hair ingrowing upon the little finger of a right hand, a pair of tweezers, a tiny wound, infection quick and spreading; blood poisoning, a few brief anxious hours for relatives and quickly gathering friends; a gray haired minister speaking falteringly, overcome with feeling, to a church full of misty-eyed men and women with bowed heads; a gathering of many persons by a graveside in the beautiful cemetery at Winter Park, tremendous heaps of beautiful flowers, feebly endeavoring to express the high regard and appreciation of many communities over the Florida peninsula; and—Roy E. Lenfest is gone, as quickly, as unobtrusively, as modestly, as bravely as he was accustomed to come and go in daily life. Yet the work he has labored to do in creating a better understanding, a more far-reaching knowledge, of the diet and habits of living of orange and grapefruit trees will live after him. Here, at least, was one whose life was not lived in vain.

Ervin Springstead comes up from Palmetto, big, comfortable to talk to, and very much in earnest as usual. A hundred acres to be planted to grove, and what shall it be? No longer a question of planting just whatever nurseries may be able to supply readily, but an earnest seeking for the best strains of proven varieties to come upon the markets when others are not in too great plenitude, and a ready discarding of rootstocks once thought to be plenty good enough. In short preparing to lay the foundation for better fruit, and therefore to be more profitable. Significant, too, of a growing trend of thought among the best posted growers, out of which will come the citrus industry of Florida of the next twenty-five years.

Hair as curly as ever, but some gray hairs there now, not quite so heavy as ten years ago, but to the casual eye otherwise unchanged; that's E. D. Dow, still traffic manager of the Florida Citrus Exchange. Still boring in and willing to take punishment fighting the transportation battles of the growers; and painstakingly following up advan-

tages it has taken long to gain, yet by eminent fairness maintaining the respect and good will of all. An exception to the general rule, one executive who has avoided the dust whirls of cooperative politics and remains at his post.

Funny thing memory; queer how some odd, unimportant incident will stick out like a sore toe years afterward when many more important things are gone and forgotten. For

instance, a meeting of the Fruitman's Club three or four years ago. Something of importance up, opinion of the assemblage divided. Explanations, finally opinion practically unanimous, everything entirely clear to everyone, except to Chester C. Fosgate. He doesn't grasp the point and is willing to say so. More explanations; Chester still not clear. Further explanations, but too many trying to talk at once and Chester, very much embarrassed, still fails to get the

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- 1 Complete short turn - cuts clear under, follows horses anywhere.
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- 8 Frictionless roller bearing direct pump drive. "Friend" direct line plungers.
- 9 Adjust packing by one nut. Remove only two screws to repack pump. Inside lubrication of pump plungers.
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Are you interested in having a sprayer with these exclusive features, cutting your spraying costs for you? If you are, you need our Big Free Catalog. Then you can study these features at your leisure. Please mail us a card to-day asking for this Free Book to be sent by return mail. Your request will have personal attention.

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"TIME TRIED AND CROP TESTED"

Forty years Satisfactory service to Florida Growers
PAINTER'S 1927 FLORIDA ALMANAC TELLS HOW
Write for Almanac, prices and discounts

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JACKSONVILLE, FLORIDA

point. A brief moment of silence, and up jumps W.H. (Bill) Mouser and shoots a question like a bullet: "Chester, do you know how to make an Englishman happy in his old age?"

And Chester, still muchly embarrassed and trying mentally to digest all that has been thrown at him so suddenly, stammers:

"No?"

"Tell him a good joke in his early youth," says Bill, and sits down as suddenly as he got up, amid gales of laughter while poor, embarrassed Chester naturally has nothing to say.

We remember that as clearly as if it were yesterday, and for the life of us we can't recall the momentous question which precipitated the situation.

— *Buttle, Lawrence*
Lawrence Gentile of the Gentile Brothers Company, solid, substantial, unmoved by whatever may be the prevailing citrus hysteria, carries weight in more sense than one. He has long been the despair of many would-be interviewers because he will not talk much. Nevertheless a man may say very little and still say "a plenty."

We had just left a group of gentlemen who were opining that the Florida citrus business was in something of a bad way. Two of them didn't own groves and had nothing to do with marketing, but they felt they knew a good bit about the situation. Two others owned small groves. The group probably represented the ownership of fifteen acres of grove, or less. A block further down the street we encounter Lawrence Gentile and obtain the following pungent interview:

Q. Lawrence, they are saying citrus growing is all shot?

A. Huh.

Q. Yes, saying there is no money any more in growing oranges or grapefruit.

A. Huh.

Q. Well, what do you think about it?

A. Oh hell!

Q. Lawrence, how many acres of grove do the Gentile brothers own and operate in Florida?

A. Enghteen hundred.

Q. Ever figure on increasing that acreage?

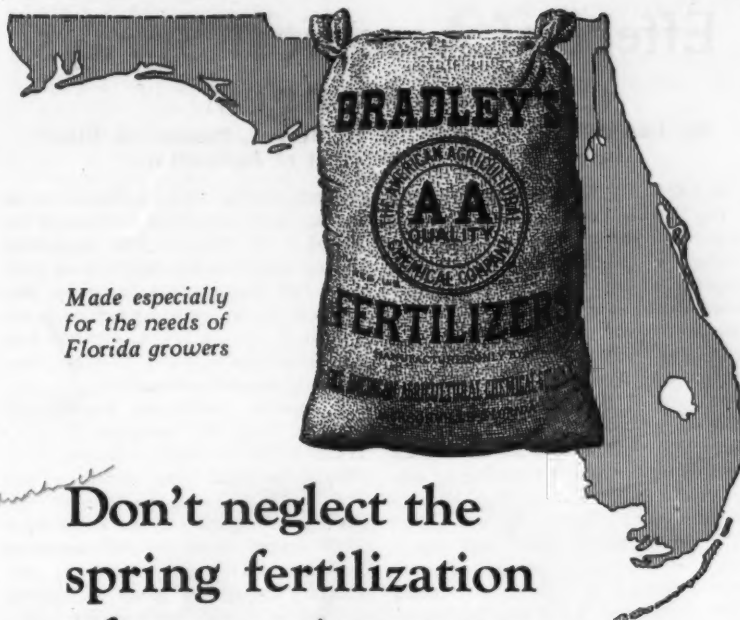
A. Yeh.

Q. When?

A. Right now; we are planting two hundred acres more.

Lawrence Gentile smiles, we separate, the interview is over; but what more would you want said after all?

Continued on page 34



Made especially
for the needs of
Florida growers

Don't neglect the spring fertilization of your citrus trees

CITRUS fruits, today, are standard items in the American menu. And people have come to demand the highest quality.

Bradley's Fertilizers, applied in time to meet the summer season, strengthen the trees and encourage them to produce firm fruit with added juiciness.

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exact needs of Florida growers. In perfect mechanical condition, and so balanced in their plant-foods that they are readily available to the growing trees. Backed by sixty years of experience in manufacturing fertilizers. Years of practical tests on our own groves prove their ability to produce maximum yields of top-quality fruit.

BRADLEY'S "AA QUALITY" FERTILIZERS

Manufactured only by

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TOP O' THE TOWN

European Plan, Fireproof 300 Rooms With Baths

THE CENTER OF TAMPA

Effect of Arsenical Sprays On Oranges

By Lon A. Hawkins and W. R. Berger, Bureau of Plant Industry, U. S. Department of Agriculture

In 1893, W. S. Hart (1) reported to the Florida State Horticultural Society that spraying oranges with a mixture of bisulphate of soda and arsenate of lime would tend to produce sweet oranges early in the fall. This method of treatment apparently originated with the Rev. Lyman Phelps, who is said to have first used a mixture of London purple and bisulphate of soda for this purpose. Since that time, arsenicals have been used to influence the ripening of citrus fruits from time to time, both in Florida and California.

In 1922, the writers took up a study of this problem and the results obtained in this experimental work corroborated the results obtained by Gray and Ryan (2) of California that soluble arsenical sprays may markedly influence the composition of citrus fruit. In most cases, the change in composition seems to be in a rapid reduction in the acidity of fruit without much change in the sugar content. This results in a fruit, the juice of which will have about the normal specific gravity, but due to the reduction in acidity, it will have a very high soluble solids-acid ratio.

Fruit sprayed once in April has been found to have an acid content of 0.197 per cent with solids-acid ratio of 51.2 to 1 on November 3 of the same year while soluble solids-acid ratios of from 20 to 40 to 1 were not at all uncommon. The normal soluble solids-acid ratio of unsprayed fruit from the same grove as shown by determinations made at the same time being around 7 to 8 to 1.

The effect of the arsenical spray is not confined wholly to the crop to which it is applied. A considerable decrease in the soluble solids-acid ratio of fruit has been noted in our experiments on fruit the year after spraying, that is, the crop set on the trees after the arsenical spray was applied.

This decrease in acidity with the comparatively normal sugar content of the juice liable to give the orange a flat, insipid taste. The fruit with a high soluble solids-acid ratio, say above 16 or 18 to 1, will lack the sprightly flavor, attractiveness, and

dessert quality that is found in an orange with a soluble solids-acid ratio of 8 or 10 to 1. The marketing of any considerable quantity of fruit with this flat, insipid flavor so that the retailer or consumer begins to expect it in certain brands or from certain localities is liable to react very strongly against such fruit.

If sprays containing arsenic are used at all in the spraying of citrus fruits to induce early maturity, they should be used very carefully and only with a small portion of the acreage designed for the early market. Promiscuous use of arsenical sprays, either home mixed or proprietary sprays, is liable to lead to a fruit of low dessert quality and a demoralization of the market for the really high grade attractive fruit from the same region. Arsenical sprays are apparently a very powerful stimulant to oranges and unless applied with extreme care are liable to lead to very unfortunate results.

THE FLORIDA STATE

HORTICULTURAL SOCIETY

Continued from page 5

ty at Bradenton is peculiarly adapted to this phase of our Florida situation and problems because located here are the big ornamental nurseries—Reasoner Bros.—and the opportunity to visit this place is a big incentive.

CLEARWATER HOPES OPEN

CAUSEWAY FOR SUMMER

The 300-foot bridge which spans the west channel of Clearwater bay as a part of the new million-dollar free causeway between this city and its island beaches is completed and prospects for the opening of the causeway in June are favorable, according to officials of the Luten Bridge Company, contractors.

Paving contracts will be let early next month by the city commission and this part of the work, together with the construction of concrete wing walls by the Ward-Latham Company, a small amount of filling by the Tampa Sand and Shell Company, and completion of the white way system, is all that remains to be done.

Various delays since the project was taken from the county by the

The Season's Sensation

Nothing in recent years has attracted the attention and interest in packing house circles which just now is being given to this new invention of a Florida man.

NEW Flexible Non-Bruise Picking Bag

Just what the industry has been looking for over a period of years. Will not bruise the fruit or the picker; works easier, faster, does not tire out the man. Makes the crop worth more money because of absence of bruised fruit.

An invention which means as much to citrus packing as the first pneumatic tires meant to the automobile industry. An inexpensive, strongly built, practical bag; but built as all must be when the special patentable features can be followed.

SAMPLE SENT: If you are a packing house manager or buyer and have not yet seen this bag, we will send you a sample on approval. Write us on your letterhead.

Non-Bruise Picking Bag Company

519 East Amelia Avenue

Orlando, Florida

(Patent Pending)

(1) Proc. Flor. State Hort. Soc. for 1893. p. 159.

(2) Gray, Geo. P. and Ryan, H. J. Reduced acidity in oranges caused by certain sprays. Monthly Bul. Calif. State Dept. Agr. 10:11-22, 1921.

April, 1927

Refrigeration Hearing Postponed

The Hearing before Commissioner Eastman and Director Bartell of the Interstate Commerce Commission scheduled for Jacksonville, Florida, March 21, in regard to Refrigeration rates on Fruits, Vegetables, Berries and Melons from the South has been postponed until 10.00 A.M. April 19th at the Hotel Mason, Jacksonville, according to advice just received by the Growers and Shippers League of Florida.

This Hearing was called by the Interstate Commerce Commission for the purpose of investigating the present refrigeration rates from Florida and four other Southern states.

According to Secretary, J. Curtis Robinson of the Growers and Shippers League, the result of the decision of the commission in this case may cost the growers and shippers of Florida thousands of dollars or they may save that amount annually, if they unite in presenting vigorous exceptions to the proposed increases which will be made.

"The Investigation into the Refrigeration rates from Florida," said Mr. Robinson, "is at the instigation of the Refrigerator Car Line operating in this territory."

"The Growers and Shippers League realize the handicap already imposed on the Florida shippers by the freight rate structure under which producers and shippers are compelled to operate and that the present refrigeration rates are already unduly high. If additional rates are proposed for refrigeration charges over and above what they are today, we confidently believe they can be shown to be unreasonable."

"The League has employed the best counsel it can secure to represent them in these hearings and if the growers and shippers really care whether they are compelled to pay from \$6.00 to \$9.00 per car or more additional refrigeration charges, they will rally to the support of the League in opposing any proposed increases. If the growers and shippers are satisfied to have their refrigeration rates materially increased the refrigerator car line will be glad to make these increases and will do so, unless the shippers through the League are able to prove to the Interstate Commerce Commission that the present rates are unduly high."

Wood from dogwood and persimmon trees is becoming quite valuable. It is used for shuttles in the textile industry.

THE CITRUS INDUSTRY CENSUS GIVES ARCADIA POPULATION OF 5,302

Arcadia has a population of 5,302 as compared with 3,479 in 1920, according to the report of E. W. Koch, of the United States bureau of census, on a canvass sponsored by the American Legion. Of these 3,621 are white and 1,681 are negroes. The Floridians, 847 natives of Georgia, population embraces 2,791 native 363 from South Carolina, 139 from North Carolina, 151 from Alabama and 117 from Illinois. Montana, Utah, North Dakota and the District of Columbia are represented by one native each.

Thirty-three

IN THE "HOSIPITILE"

The boss employed two negroes, and one morning one of them failed to show up for work.

"Where is Sam?" he asked the one that came.

"In the hospitable, boss."

"In the hospital? How did that happen?"

"Well, Sam, he done been tellin' me ev'v mo'nin foh ten days he kwine lick his wife cause o' her naggin'."

"Well?"

"Well, yistiddy he tole me again an' she done overhea'd him, da's all."

—Pittsburgh Chronicle-Telegraph.



What Prof. Mapes Did in 1847 Distinguishes Mapes Manures Today

If you were asked to compare the values of two fertilizers you wouldn't do it on analysis alone. You'd make a crop test. You know that two fertilizers of the same analysis may produce widely different crop results, due to the difference in materials from which they are compounded. The crop knows what it wants better than the chemical laboratory.

Prof. James J. Mapes, originator of Mapes Manures, was a famous and expert chemist; but he also knew the difference between laboratory tests and crop results. So he bought a farm, in 1847, to check up in the field what he had learned in the laboratory. He asked the crop.

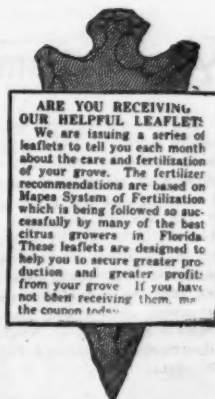
Mapes users know that this is what today distinguishes Mapes Manures. They are made to grow good crops. The materials are selected on the basis of the best crop results. We go to the crop; we ask it what materials it likes best; we put these materials into Mapes Manures. That is why Mapes users are so loyal to Mapes Manures. And that is why more good farmers every year are using Mapes Manures.

Try Mapes this year. Compare the crop yield, the crop quality and the crop profits with the results from any other fertilizer you can buy. You'll learn what we mean when we say that Mapes Manures are made to grow good crops—not to sell at a price. They are first made right, then priced as low as possible. Mapes costs little more—worth much more."

MAPES

Manures

cost little more ~ worth much more



ARE YOU RECEIVING OUR HELPFUL LEAFLET?
We are issuing a series of leaflets to tell you each month about the care and fertilization of your grove. The fertilizer recommendations are based on Mapes System of Fertilization which is being followed so successfully by many of the best citrus growers in Florida. These leaflets are designed to help you to secure greater production and greater profit from your grove. If you have not been receiving them, the coupon below—

The Mapes Formula & Peruvian Guano Co., Dept. 16
Jacksonville, Florida

Will you please add my name to your mailing list so that I will receive the leaflets on Citrus Culture? This does not obligate me in any manner

My grove consists of _____ bearing trees and _____ young trees.
My grove is located at _____
My name is _____
My address is _____

IMPRESSIONS

Continued from page 31

Herman Dann as president of the Florida State Chamber of Commerce addressing the directors of that organization at the March quarterly meeting held in Orlando. Herman recites how some man from outside the state has suggested the appointment of a "citrus czar," to run the Florida citrus business, and by inference indicates it may not be such a bad idea. He fails to mention that the suggester in question has no connection with citrus or produce and makes no claim to any real information upon the subject, nor does he, Herman. General A. H. Blanding, production manager for the Florida Citrus Exchange, sitting alongside us and listening in on the proceedings says nothing and simply looks slightly more bored, if possible, than he had been looking. We continue to sit and listen for a long period to the things which follow. Our impression is that the Florida State Chamber of Commerce is unfortunately hampered in its efforts to serve Florida. It seems besieged by a considerable number of faddists and theorists who, unable to command satisfactory audiences in their own voting precincts, fondly embrace the opportunities which these meetings afford.

CLASSIFIED

Advertisements

The rate for advertisements of this nature is only five cents per word for each insertion. You may count the number of words you have, multiply it by five, and you will have the cost of the advertisement for one insertion. Multiply this by the total number of insertions desired and you will have the total cost. This rate is so low that we cannot charge classified accounts, and would, therefore, appreciate a remittance with order. No advertisement accepted for less than 50 cents.

REAL ESTATE

WILL EXCHANGE West Texas cattle ranch for unimproved or improved land in Florida. What have you? Give price and full particulars. T. E. Bartlett, 3410 McKinley Ave., El Paso, Texas.

"BOOK OF TRUTH"
For planters of new groves
Is yours for the asking.
Write Today.

OCKLAWAHA NURSERIES INC.
"Pedigreed Citrus Trees"
Lake Jew, Florida

FOR SALE CHEAP—Eleven acres high, rolling citrus land; 4 acres cleared with small house, and large nice bearing orange trees full of fruit. Nicely located near Altamonte Springs, Fla. For partic-

THE CITRUS INDUSTRY

ulars write H. A. Lunquiere, 41 N. W. 29th St., Miami, Fla.

FIVE ACRES and a town lot, all for \$700.00. Biggest bargain in Florida. Certain money maker. We want reliable salesmen to present this meritorious proposition to investors. Sumter Gardens and Bushnell Park lots. Every purchaser highly pleased. Florida Garden Land Company, Box 1759, St. Petersburg, Florida.

WANT TO SELL HALF INTEREST IN FIFTEEN ACRE SATSUMA BEARING GROVE ON HIGHWAY NEAR PANAMA CITY. ROBT. LAMBERT, OWNER. FOUNTAIN, FLA.

SATSUMA BUDWOOD from Bearing Trees. Hills Fruit Farm, Panama City, Fla.

FOR SALE—Pineapple land in winterless Florida. \$15 an acre. Almont Ake. Venus, Fla.

WANTED—To hear from owner of land for sale. O. Hawley, Baldwin, Wis.

MISCELLANEOUS

\$1950.00 TO \$3500.00 income per acre from limes; want partner, exclusive lime culture. Jas. N. Foreman, 4026 2d Ave. S., St. Petersburg, Fla.

FROSTPROOF cabbage plants—500 \$1.00 postpaid. Expresed \$1.00 thousand. Wholesale Plant Co., Thomasville, Ga.

ADVERTISING RESEARCH WANTED: Specialist in foods and nutrition, drugs, disinfectants, and insect control. Successful record in copy work and syndicate writing. Desire assignments in fruit products. Can introduce new facts and put new punch into educational advertising. Mrs. Susa P. Moore, P. O. Box 523, Chicago.

CITRUS FRUIT TREES: All varieties at very attractive prices. No order too large or too small. Either mixed trees for home planting and replacements, or large orders for commercial plantings. Sizes $\frac{1}{2}$, $\frac{3}{4}$, 1, 1 $\frac{1}{2}$, 2, and 2 inch caliper. On sour orange and rough lemon root. Finest quality, clean, straight, well rooted from prolific bearing stock. Our quality and price will save you money. Let us know the variety, size and number of trees which you will require and our special quotations will be given. A. E. Nichols, P. O. Box 262, Tampa, Fla. Apr-May-June

FOR SALE—Dairy and scable manure, car lots. Link & Bagley, Box 464, Tampa, Fla.

WHITE WYANDOTT Cockerels, regal strain—the best in the country, direct from Martin pens. Utility and show birds \$5.00 each; also eggs for hatching \$5.00 per 15. W. A. King, Gen. Del., St. Petersburg, Fla.

SOUTHDOWN SHEEP, White Rocks, Toulouse Geese, Guineas, Angora and Milk Goats, Circular free. Woodburn, Clifton, Va.

WANTED: Competent man to work ten acre farm near Ocala, Florida, profit sharing basis. Young tangerine grove, many fruit trees, rich soil. Big money in onions, poultry. Comfortable, furnished house, good barn. R. F. D. 41, Burbank, Fla.

FARM—GROVE—HOME
22 ACRE large bearing grove; modern two-story, 8 room house, completely furnished on third largest lake in state in thriving town; good roads, church, schools; complete line farm implements and tools. P. F. Cloonan, Yalaha, Lake County, Fla.

HIGH BLOOD PRESSURE easily, inexpensively overcome, without drugs. Send address. Dr. J. B. Stokes, Mohawk, Fla.

FOR SALE—200 pure bred white Leghorn hens \$1.25 each, any quantity. Cockerels \$2 each. Fain's Hatchery, Edison, Ga.

PUREBRED PULLETS FOR SALE—White Leghorns and Anconas ready to ship. Barred Rocks and R. I. Reds shortly. Several hundred yearling White Leghorn hens now laying 70%. Write or wire for prices. C. A. Norman, Dr. 1440, Knoxville, Tenn.

LAREDO SOY BEANS, considered free from nematode, excellent for hay and soil improvement. Write the Baldwin County Seed Growers Association, Loxley, Ala.

bama, for prices.

MILLION Porto Rico Potato Plants, \$2.50 1000. W. W. Williams, Quitman, Ga.

FARMER AGENTS: Make \$25.00 weekly selling Comet Sprayers. Profitable winter employment. You take orders. We deliver and collect. Commissions weekly. Established 35 years. Particulars free. Rusler Co., Box C-18, Johnstown, Ohio.

JERSILD'S Invincible Strain White Wyandottes, bred for eggs, meat and beauty since 1905; hatching eggs, baby chicks, breeders and young pullets. Catalog free. Peter Jersild, Foley, Ala.

EARLY BEARING Papershell Pecan trees budded or grafted and guaranteed. Great shortage this year. Write for catalog today. Bass Pecan Company, Lumberton, Miss.

We Collect Notes, Accounts, Claims anywhere in world. No charges unless collected. We have collected in every State in Union, Canada and foreign countries 25 years experience. MAY'S COLLECTION AGENCY, 28 Tinker Building Orlando, Fla.

FOR SALE—All varieties bananas and citrus trees. D. A. Nigels, Palm Harbor, Fla.

STRAWBERRY PLANTS. Send \$2.50 for 500 Missionary or Klondyke. \$4.50 per 1,000. Ready now. John Lightfoot, East Chattanooga, Tenn. 10-12

RUNNER peanuts—Spanish peanuts Early speckled - Osceola - White Chinese and Bunch Velvet Beans. All varieties peas and Soybeans. Large or small lots. H. M. Franklin, Tennille, Georgia.

BABY CHICKS: Sent C.O.D. Pay when they arrive. Leghorns \$16.00 per 100; Bars, Reds, Minorcas, Orpingtons, \$13.00; Mixed \$15.00. Postpaid. Florida Baby Chickery, Lakeland, Fla.

LOOK—APRIL PRICES—Norman's chicks South's oldest, largest plant. Flocks tested & accredited. Quality. Thousands daily. Ready now. Fully prepaid and guaranteed. Write or wire. Per 50 100 500 1000
B. & W. Leg., Anc. \$7 \$14 \$65 \$125
Orps. Rocks, Reds, 8 15 73 140
W. Orps. W. Wyand. 9 16 78 150
Assorted chicks 6 12 55 100
Sensible cat. with new helpful brooding ideas. Buckeye brooders, quick shipment. C. A. Norman, Knoxville, Tenn. (I.B.C.A.)

Statement of the Ownership, Management, Circulation, Etc., Required by the Act of August 24, 1912, of The Citrus Industry Published monthly at Tampa, Florida, for April 1, 1927.

State of Florida,
County of Hillsborough.

Before me, a Notary Public, in and for the state and county aforesaid, personally appeared S. L. Frisbie, who, having been duly sworn according to law, deposes and says that he is the manager of The Citrus Industry, and that the following is, to the best of his knowledge and belief, a true statement of the ownership, management, etc., of the aforesaid publication for the date shown in the above caption, required by the Act of August 24, 1912, embodied in section 443. Postal Laws and Regulations, printed on the reverse side of this form, to-wit:

1.—That the names and addresses of the publisher, editor, managing editor and business manager are:

Editor, S. L. Frisbie, Tampa, Fla.
Business Manager, S. L. Frisbie, Tampa, Fla.

2.—That the owners are:
Associated Publications Corporation, Tampa, Fla.

S. L. Frisbie, Tampa, Fla.
S. Lloyd Frisbie, Tampa, Fla.
B. L. Gable, Tampa, Fla.
F. L. Skelly, Orlando, Fla.
Frank Kay Anderson, Winter Park, Fla.
R. C. Skinner, Dunedin, Fla.
F. P. Wall, Tampa, Fla.

3.—That the known bondholders, mortgagees and other security holders owning or holding 1 per cent or more of total amount of bonds, mortgages or other securities, are:

Mergenthaler Linotype Co., Brooklyn, N. Y.

Polk County National Bank, Bartow, Fla.
J. K. Stuart, Bartow, Fla.

Sworn to and subscribed before me this 31st day of March, 1927.

J. W. GRAHAM,
Notary Public.